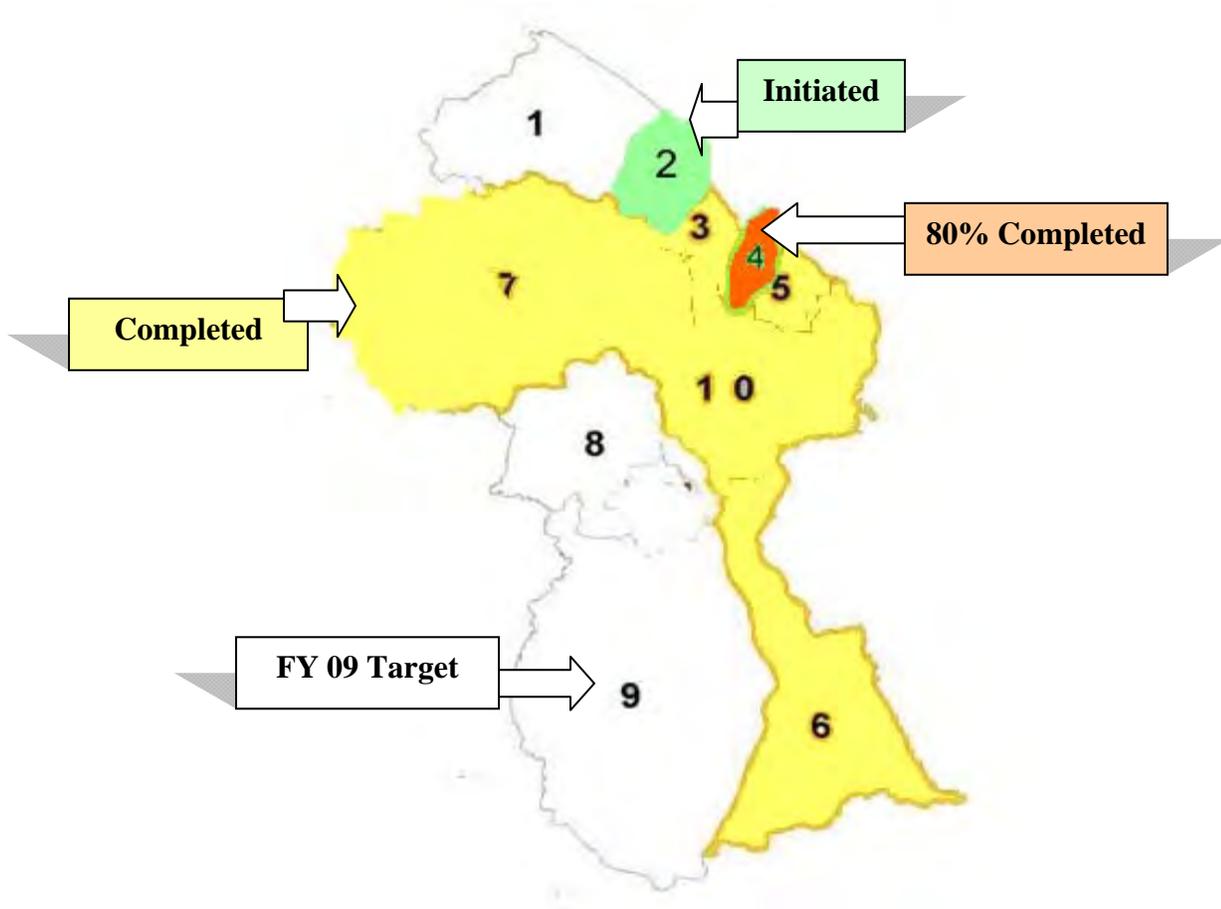


Guyana Safer Injection Project

ANNUAL REPORT
OCTOBER 2007– SEPTEMBER 2008



INITIATIVES INC. OCTOBER 2008

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Acronyms

CDC	Center for Disease Control
EPI	Expanded Program on Immunizations
FXB	Francois Xavier Bagnoud Center (USAID Project)
GDF	Guyana Defense Force
GHARP	Guyana HIV/AIDS Reduction and Prevention Project (USAID Project)
GPHC	Georgetown Public Hospital Corporation
GSIP	Guyana Safer Injection Project
GUYSUCO	Guyana Sugar Corporation
HAP	Humanitarian Assistance Project (US Embassy)
HCW	Health Care Worker
ILO	International Labor Organization
IS	Injection Safety
ITECH	International Training and Education Center on HIV/AIDS
MOU	Memorandum of Understanding
MMU	Materials Management Unit
NAPS	National AIDS Programme Secretariat
NDC	Neighborhood Democratic Council
NR	Needle Remover
NSI	Needle Stick Injury
PAHO	Pan American Health Organization
PEP	Post Exposure Prophylaxis
PPE	Personal Protective Equipment
PRR	Prescription Record Review
RDC	Regional Democratic Council
RDU	Rational Drug Use
RHO	Regional Health Office(r)
SOP	Standard Operating Procedure
SCMS	Supply Chain Management System (USAID Project)
STSU	Standards and Technical Service Unit (MOH)
TOT	Trainer of Trainers
WHO	World Health Organization
WIT	Waste Management Implementation Team (Municipality)
WM	Waste Management

INTRODUCTION

In line with the FY 08 objectives, the project team focused on the difficult task of addressing the needs of the national referral hospital, GPHC, and the political subdivisions of the capital region as well as continuing to build capacity and sustainability for injection safety at the national, regional and facility levels. Project leadership helped to ensure not only that the workplan was followed but that GSIP interventions met quality standards.

During the period October 2007 – September 2008, the project finalized activities in regions 3 and 7, completed about 80% of region 4; and initiated planning in region 2. GSIP exceeded its PEPFAR target of training 1000 providers, waste handlers, prescribers, logistics staff and managers on the Worker Safety Policy. It went beyond the PEPFAR categories to train 154 pharmacists and pharmacist assistants in medication counseling to assist prescription adherence.

Several special initiatives were introduced or completed to assist MOH to develop a sustainable and robust injection safety policy and program. This included the finalization of the Prescriber Record Review study, the Home Use Insulin operations research and the preliminary work for an injection safety certification process to be piloted in year five.

Policy dissemination roll out continued and the sharing of best practices across regions to improve pre exposure and post exposure actions to reduce health worker risk led two facilities to introduce hepatitis B and tetanus vaccination mandatory policies; storage sites for personal protective gear; and improved coverage for PEP. Gradual assumption of budgets for bin liners, bins and PPE by regions is heartening. Additional efforts to facilitate take over of safety box and safety syringe costs are being made. Collaboration in the area of final disposal for sharps has resulted in leveraging funds for construction and strategic placement of Demonfort incinerators. Increased interest in monitoring resulted in GSIP helping at least two regions to strengthen injection safety monitoring indicators, tools and processes.

Our multi-level strategy provides the policy environment, management systems and interventions necessary to build an effective injection safety program for Guyana

Multi Level Approach

Key National Activities	Key Regional Activities	Key Facility Activities
<ul style="list-style-type: none"> ⇒ Policy/Guidelines Development ⇒ Equipment Quality Standards ⇒ Treatment Guidelines ⇒ Adherence Oversight ⇒ Intersectorial Collaboration ⇒ Training Institutionalization 	<ul style="list-style-type: none"> ⇒ Policy Promotion ⇒ Pre/Post Exposure Care ⇒ Using IS Data ⇒ Final Disposal Options ⇒ Budgeting for Equipment and Supplies ⇒ Community Outreach 	<ul style="list-style-type: none"> ⇒ Standards & Training ⇒ Pre/Post Exposure Prophylaxis ⇒ IS/WM Equipment ⇒ NSI Recording and Analysis ⇒ RDU and Medication Counseling ⇒ Monitoring & Supervision

KEY ACCOMPLISHMENTS

National Policy and Plan

- Policy launched: 266 senior managers and staff oriented to policy
- Regional policy dissemination plans initiated and regional safety procedures adopted
- GSIP invited to join National WM Oversight Committee

Studies

- PRR study completed; draft report prepared
- Home-use insulin operational research project completed; draft report prepared
- Standards for IS certification pilot completed and pilot sites selected

Procurement/Logistics

- GSIP contributed IS equipment specifications to new national Medical Supply List
- Landscape vendor booklet developed to assist MMU/MOH in ordering IS supplies
- Buffer supply of syringes distributed to facilities at risk for stockouts
- Quality insulin syringes used in operation research accepted as standard for future MOH procurement
- Bin liners are currently being purchased by several regions

Commodity Management

- Logistics training updated based on changes in system and provided to logistics and ward staff
- PPE distribution tied to storage availability

Capacity Building

- Revisions completed on all IS/WM curricula; final documents ready for formatting
- 154 pharmacist and pharmacy assistants trained on medication counseling
- 27 Trainers prepared to and providing training to MOH and GDF providers and waste handlers
- Efforts to integrate IS curricula/modules into pre and in-service training programs successfully continues.

Worker Safety

- Pre-exposure vaccinations for HCWs and municipality carriers integrated into administrative system at facilities
- Two hospitals have created policies and procedures for mandatory vaccination
- Worker Policy actively supported by public service unions
- NSI ledger capturing detailed information on sharps injuries to guide interventions.

Behavior Change & Advocacy

- WIT team reached 928 people with IS messages at markets, popular communal sites and workplaces

Monitoring & Evaluation

- Midterm review conducted and analyzed to inform GSIP strategy
- BCC assessment finalized; draft report ready to be shared and results addressed

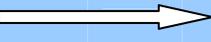
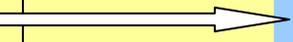
HIGHLIGHTS

Lessons Learned

The following lessons learned will guide future planning:

- ✓ Giving guidance to regional/facility management on criteria for identifying potential TOTs and providing continual support and feedback through training fast tracks their ability to independently train
- ✓ Partnerships have been key to building on GSIP's initiatives, including construction by the US Humanitarian Assistance Program to construct final disposal options; financial assistance for PPE and segregation supplies by private sector and community members, and the Ministry of Local Government to assist local facilities in clearing final disposal sites and providing budget for IS supplies.
- ✓ Two qualitative results provide insight for future efforts: the BCC assessment uncovered risky practices continued due to habit, infrastructure, staffing, training, lack of monitoring and equipment problems; the assessment and GSIP surveys found that interventions increased staff self-respect, sense of being valued and protected.
- ✓ Midterm assessment revealed staff turnover requires continual retraining, GSIP needs to develop a refresher training course and more importantly a strategy to institutionalize training and capacity at regional and facility levels. .
- ✓ The recent MOH directive to remove needle removers from facilities based on PAHO's discomfort with a lack of official approval from WHO not only signals that WHO needs to speed up its policy decisions but that GSIP has to increase efforts to work in partnership with other resources to find effective sharps disposal methods for resource-poor health centers and posts.
- ✓ Although there is willingness to abide by the policy directive for full tetanus and PEP vaccination, attention needs to be paid to willingness of staff to be vaccinated, documentation of need and, at times, availability of vaccine.

SCALE UP SCHEDULE

Reg.	Total Facilities ¹		% Pop	ACTUAL				PROJECTED
				Pilot Phase Year One	Year Two	Year Three	Year Four	Year Five
1	4 3 52	Hosp HCs HPs	3.2					
2	2 11 17	Hosp HCs HPs	6.6					X 
3	4 14 18	Hosp HCs HPs	13.7			X		
4	1 37 10	Hosp HCs HPs	41.3	GPHC Infectious Disease Wards GUM Clinic (HIV)		X		
5	2 15 1	Hosp HC HP	7.			X		
6	5 21 3	Hosp HCs HPs	16.5	Skeldon Hosp OPD – New Amsterdam Maternity Ward & 4 HCs	X			
7	2 2 19	Hosp HCs HPs	2.3	Bartica Hospital 1 HC		X		
8	2 5 16	Hosp HCs HPs	1.3					X 
9	2 4 56	Hosp HCs HPs	2.6					X 
10	3 10 19	Hosp HC HPs	5.5	Linden Hosp OPD & 3 HCs	X			

MAINTENANCE

¹ Facility totals have been changed to reflect current distribution of HCs, HPs and hospitals

COLLABORATION

Partnerships: To ensure wise use of resources, GSIP actively seeks partnerships with key organizations and agencies and projects in Guyana. To this end, GSIP is partnering with:

Policy	MOH, Standards and Technical Unit, NAPS
Implementation	Public Service Union, EPI, Guysuco, MOL
Community Outreach	Guyana Press Association, WIT
Media	Guyana Press Association, ILO, UNAIDS, Radio Meroundoi
Waste Management	RDC, NDC, EPI, HAP, PAHO, MOH Oversight Committee, Hope Foundation and the Private Sector
Training	GHARP, EPI, MOH, I TECH, Schools of Nursing, University of Guyana, Pharmacy Council, Medex, GDF
Rational Drug Use	Medical Association, FXB, Guyana Pharmacy Association, SCMS
Logistics	SCMS, MOH, (MMU/Chief Pharmacist)

QUALITATIVE UPDATE

Planning & Management

Coverage: GSIP is expected to reach all ten regions and facilities during its tenure, albeit with interventions tailored to the level of care provided and the accessibility of sites. We have completed the majority of region 4, which covers 2/5 of the population and houses the national referral hospital and have begun planning for region 2. Based on the effectiveness of our

% Population covered thru September 2008:	85%	approach, the Ministry of Health has requested us to provide training to the four new Diagnostic Centers staffed
Number of Regions:	6	
Number of Facilities with IS activities:	175	

by the Cuban government. Ministry monitoring visits found the Centers are not meeting injection safety or infection control standards. In Year 5, we will develop a plan for working with the Diagnostic Centers, whose largely Spanish speaking staff provides a linguistic challenge and initiate activities in Region 2 and the sparsely populated hinterland areas: regions 1, 8 and 9.

Regional Approach: Our approach has been honed over the years; the collection of vital regional data about channels of information, lines of authority, key civil and ministerial organizations as well as facility staffing, injection safety and waste management practices and supportive systems helps GSIP develop a tailored strategy and a region specific Memorandum of Understanding and action plan with clearly defined roles and responsibilities. Region 4 with six separate authorities made the MOU process a little cumbersome but nevertheless the regional update meetings were held regularly and training managed to combine participants from various districts.

Region 7 was also completed as was most of Region 4; launch activities will be organized in FY 09. A big boost in reaching the large numbers of staff in region 4 was developing the capacity of key staff to become trainers; this will also provide a sustainable force for in- and potentially pre-service training.

Policy: The official launch of the Health Care Worker Policy by the Minister has had a payoff in understanding of the risks faced by workers and actions to prevent transmission through safety equipment, personal protective equipment, immunizations and PEP counseling and testing. To date, GSIP has trained 266 leaders, who are to assist the regions in their dissemination of information to health facilities and related Ministries on improving and monitoring safety precautions. This activity is being coordinated by the MOH Regional Health Service Officer. The Guyana Local Government Officers Union, the Guyana Public Service Union and the Guyana Labour Union are working to encourage staff to adhere to the principles espoused in the policy.

GSIP policy training of MOH officials: 266

National Coordination: The Project continues to keep the National AIDS Program Secretariat (NAPS) informed about our activities, our work with VCT and PMTCT sites and gaps identified in PEP coverage and seek their approval for our promotional and technical training material. The Standards and Technical Services Unit (STSU), has been our partner in policy development and dissemination and in developing standards for monitoring the quality of health care including injection safety practices.

Standard Treatment Guidelines and Medical Supply: GSIP is continuing to work with SCMS and the MOH on the dissemination of the treatment guidelines and the inclusion of non-injectables as the first line of treatment as appropriate. The guidelines were expected to be drafted by August 2008 but there has been a delay due to technical and political issues. GSIP provided all data and specifications to ensure injection safety equipment is included in the new MOH National Medical Supply list.

Decision Making

The project is intent on delivering evidence-based recommendations to the Ministry to assist in procurement, policy development, standard treatment guidelines and Essential Drug List revisions.

PRR Study: The Prescription Record Review (PRR) was a two-part study that collected data on actual prescriptions from out-patient department patient records in an effort to establish pre- and post-intervention prescription trends at selected study public hospitals in Guyana. Based on the baseline study results, GSIP and the Guyana Ministry of Health designed and implemented a range of safer injection training activities at West Demerara Hospital with the specific goal of reducing unnecessary injections. GSIP designed interventions targeting prescribers, providers, pharmacists and patient advocates. Key training themes included rational drug use education, expansion of medication counselling to improve patient adherence, and reduction of patient demand for injectables through patient education and awareness.

Following interventions, data was collected at West Demerara Hospital using the same methods, procedures and calendar months employed in the baseline study period. The main results are summarized below:

- Proportion of cases receiving one or more injections declined from 29% at baseline to 21%* at follow-up
- Decline from 11% to 8%* in proportion of total prescriptions issued in injectable formulation
- The prevalence of unnecessary injections declined from 34% at baseline to 30% at follow-up*
- Use of injections to treat 'Body/back/limb ache/pain' cases declined from 41% at baseline to 11% at follow-up.

The statistically significant decline in patient cases receiving injections, prevalence of injectable prescriptions and prevalence of unnecessary injections suggests that exposure to rational drug use interventions has resulted in behavior change at West Demerara Hospital. Unnecessary injections, in particular, have declined, which are precisely the injections targeted by interventions because they can be easily be treated with an equally effective oral prescription

The study results, after USAID review, will be presented to the Ministry to inform follow up action related to the Essential Drug List, training and monitoring of prescription practices and patient education.

Home Use Insulin Syringe Pilot Study:

GSIP conducted a Safer Insulin Needle Use and Disposal Pilot to address the findings of the 2007 assessment of home insulin use and disposal. The pilot used operations research to help identify viable approaches to improving the safety of insulin needle use and disposal. It included three government hospitals and two GUYSUCO clinics. It ran from January 15 through June 30, 2008 and aimed to improve counseling, test a range of insulin syringe disposal containers, systems for needle return to clinics and options for full needle supply to clients.

Four methods of disposal were tried in the Pilot: 2.5 liter safety boxes, a needle clipper, empty tablet containers sourced from hospital and clinic pharmacies, and client-sourced containers. GSIP provided government pilot sites with enough syringes to supply each insulin user with a single syringe for each injection. Clients were issued containers and syringes or instructed to

* Statistically significant difference at the 0.05 level (p<0.001)

source containers during routine diabetes clinic visits and advised to return their containers to the clinic at the next monthly visit. Results suggest that nurses and pharmacists provided counseling and that it was effective; all disposal containers tested were assessed to be safe. Across the board, clients were highly satisfied with the insulin-needle disposal systems, including containers and return procedures. There was very little difference in the assessment of disposal methods; return of containers to health facilities was, in general, better than expected with the exception of GPHC. Clients appreciated receiving a syringe for each injection. All of the twenty-five nurses, pharmacists and waste handlers interviewed felt the program for safer insulin disposal and needle use should continue.

Empty tablet containers emerge as the preferred and most cost effective option, but the issue of shortages needs to be addressed. Providing a full supply of insulin needles to each diabetic client would cost an estimated additional \$193,991USD to implement, but is desired by clients.

Injection Safety Certification Pilot:

GSIP is working with MOH to find effective mechanisms for helping facilities meet quality standards; injection safety is taking the initiative in designing a certification process that will provide valuable lessons for the Ministry's larger health facilities licensing plan. The pilot will utilize agreed on GSIP/MOH performance standards to establish a certification process that will serve as the foundation for the long-term regulation and improvement of injection safe care services. Beyond the MOH approved standards, the process includes a standardized measurement system and scoring system and a standardized survey and action planning process. Five sites have been identified to participate in the pilot; staff will be trained on the standards and assisted to conduct self assessments to assess current adherence and to develop corrective action plans to address the shortcomings. Once the facilities signal they are ready; senior MOH staff trained as external reviewers, will conduct an assessment to assess compliance to injection safety standards. The facilities that meet the criteria will be awarded with a symbol to recognize their achievement.

The community will be involved in the design of the 'symbol' and a campaign to inform the community of the significance of the symbol will be developed. The Standards and Technical Services Unit will be GSIP's partner in design and implementation of the project and the findings and results will be shared with the Ministry to inform their national licensing process.

Capacity Building

Training: GSIP prides itself on developing curricula to assist providers and waste handlers to understand and adhere to standards; logistics staff to appropriately order injection safety equipment; supervisors to monitor adherence and support staff; physicians to understand the principles and practice of rational injection use; and now pharmacists to provide counseling on medication to patients.

This year the challenge of training over 1000 staff was met by increased efforts to create a cadre of trainers for injection safety. Based on our prior experience with TOTs, we took care to ensure the selected staff had technical and some training experience, and were available and empowered to participate in training. Our objective was to ensure their training skill and commitment would serve beyond the timeframe for GSIP. Twenty-seven trainers were prepared, including staff from GPHC, the Universal Janitorial Service staff, Public Health, the Guyana Defense Force, Municipal Clinics and the East Bank. They were taught to provide a full range of training from injection safety to waste management to logistics to patient counseling. Each month a trainer worked with one GSIP staff to conduct training; feedback and self evaluation followed each session to continually build their skill. To date, all trainers are actively participating in in-service trainings at their facilities, and give support to cross discipline training sessions: trainers from the Georgetown Municipality and GPHC supported their GDF colleagues in training 26 MEDICs in IS and waste management, other trained the outlying hospital and clinic staff in region 7.



Trainer feedback:

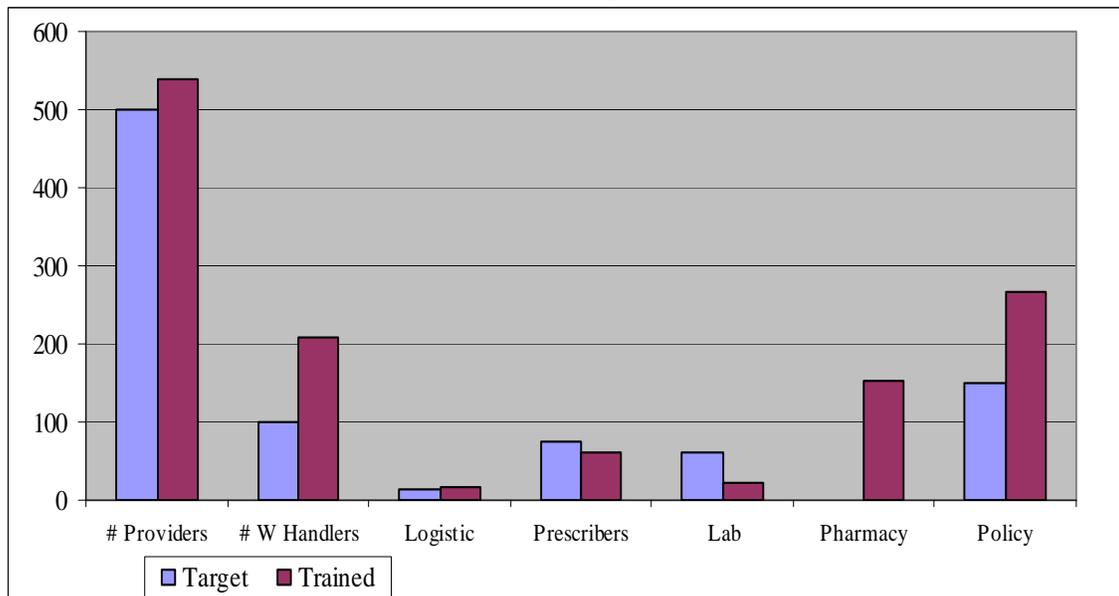
Michelle Christian – *“As a result of my exposure to TOT, IS and WM training, ‘on the job training’ becomes a part of my every day life at work. Matron asked us to share and reinforce IS knowledge on the wards – at the end of the day all of us will benefit. I was encouraged to open out and do my best at training sessions – I now feel confident and strong to deliver on IS - thanks to GSIP. ”*

Debora Henry: *“I don’t have a problem with the training content. I find the module very comprehensive. As SHV, I apply the logistics principles at my work place, so I avoid having excess supplies. I am glad that we have more stake holders to help execute the MOH’s programs”.*

Cleopatra Barkoye: *“What I like about being a trainer is the personal benefit I receive. I mean that if I get stuck by a used needle I know what to do, and apart from that, when I contract a blood borne disease of which there is no cure in Guyana, I will lose everything I have worked so hard for. Even though I don’t get everything I need to work with, when I see staff doing “it” right, you know that you have made an impact, and that is good. I also teach the theatre technicians, so I will work to integrate IS into the training module*



Year 4 Training Data



Institutionalization: We continue to try to integrate injection safety material into the pre- and in-service training for all categories of staff. The challenge is to find consistent, sustainable leadership at the schools or training institutions. In spite of set backs we are seeing progress:

Program	Status
Nursing Schools	New Chief Nurse has been oriented; strategy for integration is being completed potentially in conjunction with revision of total nursing curricula
MOH Medex Program	Program is reviewing the material for appropriate integration.
CHW	IS training introduced and being reviewed to note areas for integration
Community Midwives	To be addressed FY 09 with the Medex Program
VCT/PMTCT Program	IS training has been included in their curricula.
Public Health	EPI has integrated relevant portions of the IS curricula into their training.
Home Based Care	Integration is complete; program will update curricula based on findings of the home-use insulin study
Guyana Defense Force (GDF)	IS will be included into the MEDIC program to enable the 57 MEDIC to provide safe care to enlisted men and their families.
Pharmacy Assistant Program	The GSIP medication counseling curricula and job aid, developed with MOH support, is being introduced into the Pharmacy Assistant Program
GPHC Patient Care Assistant, Theater & Orthopedic Technician Programs	New cadre for GPHC, process for IS integration will be start in early FY 09
University of Guyana	Pharmacy and Laboratory programs will be approached early FY09

Year 5 should allow us to finalize the integration and work with the institutions to help them use the curricula material appropriately.

Rational Drug Use

The training of prescribers was delayed as GSIP searched for a capable local consultant to take on the task. Dr. Waddel, a practicing prescriber for more than twenty years, began working with GSIP in September. His knowledge spans all levels of care and his interactive approach has



stimulated a lot of discussion among doctors and MEDEX who actively shared their experiences and developed their knowledge in rational prescribing. This year, 81.8% or 61/75 prescribers were trained.

GSIP is also reaching prescribers in the public and private sectors through partnerships with other PEPFAR projects and NAPS. Once the standard treatment guidelines are finalized and disseminated, increase opportunities for emphasizing RDU will emerge.

Worker Safety

GSIP continues to introduce the need for pre-exposure vaccinations, post-exposure guidance, documentation of vaccination and NSI, protective equipment for workers handling waste, and monitoring of the results to all regions. Waste handlers, municipal waste carriers and injection providers are targeted for tetanus and hepatitis B vaccinations; the data is kept at the Regional Health Office and the hospital and the municipality. To encourage staff to receive vaccinations, public service unions have been enlisted to promote adherence among their members. Similarly, municipalities encourage their workers to be vaccinated. Bartica Hospital is one of the first facilities to achieve 100% documentation and coverage of Hepatitis B and tetanus vaccinations. Georgetown Public Hospital Corporation and Region 10 have introduced new policies and procedures to mandate and encourage pre-exposure vaccinations.

Vaccinations for Oct 07-Mar 08				
Staff	Hep B Dose 1	Hep B Dose 2	Hep B Dose 3	Tetanus
Nurse	77	54	136	169
W/H	585	524	448	423
Total	662	578	584	592

GSIP has supplied ledgers to all facilities to record NSIs and their causes. The number of NSIs

Region	Facilities w vaccination and NSI Ledgers	Region	Facilities w vaccination and NSI Ledgers
3	36/36	6	29/29
4	44/48	7	16/23
5	18/18	10	28/28

recorded has increased; the highest number (10) was in Region 6 followed by

Recorded NSI Oct07-September 08	
Oct 07oMar 08	23
April –September 08	25
Total	48

region 10 with 6. In accordance with guidelines for PEP, staff is referred to ARV sites for counseling and testing and PEP as appropriate and causes of NSIs are investigated.

Laboratory

Although GSIP has routinely included laboratory staff in training programs and ensured that the worker safety policy addresses laboratory as well as general staff safety, injection safety programs have been asked to put new emphasis on reducing the risk factors in laboratory practices. During the midterm assessment, four laboratories were assessed: all had appropriately placed safety boxes and phlebotomists were observed to immediately dispose of used needles; vacutainers tubes were used and no recapping took place. No staff reported needle stick injuries. Issues of concern were low rates of hand washing and no glove changing between patients. GSIP developed a focused training, initially used at GPHC, where their assessment found phlebotomists recapped during sample collection. To date GSIP has reached 36% (22/61) of laboratory workers and will complete the training and continue monitoring in year 5.

Waste Management

October 07-September 08			
Region	# Waste Handlers/Waste Carriers	# Trained	%
3	48	45	93%
4	181	162	89%

GSIP is working to ensure that management and staff are trained on medical waste standards, particularly related to contaminated sharps, and monitored on adherence. In the three focus regions for year 4, waste handlers have been trained by GSIP in collaboration with trainers from GPHC.

To improve management of sharps waste at the facilities, GSIP facilitates a meeting with waste handlers, management and providers to develop facility waste management plans. In some cases, the planning is conducted at EPI sessions with outlying facilities; GSIP then prepares the wall chart which is disseminated through Public Health outreach workers. Dissemination is still in process in some remote areas.

Regions	# Facilities	# Facilities with Plans at the site	%
3	36	29	82
4	45	43	100
7*	23	12	52
Total	107	73	68

Finally all waste handlers are provided with equipment to reduce their risk to sharps injuries and disease transmission. The following equipment was distributed to regions 3, 4 and 7 this year.

Regions	Equipment Supplied		
	Boots	Aprons	Gloves
3	60	108	106
4	60	95	98
7	6	18	9



Infectious bins used in region # 4 east coast & east bank.

Partnerships were important in helping facilities obtain bins, liners and PPE. Some regional administrations face budget deficits and cannot procure segregation supplies and equipment for proper segregation. In Region 4, the Regional Administration supplied waste bins to health facilities in the East Coast and East Bank districts. In region 6, Scotia Bank of New Amsterdam and the New Amsterdam Chamber of Commerce funded personal protective equipment for municipal waste carriers. In region 7, Hope Foundation, an NGO, which received BCC and IEC training from GSIP, donated bin liners to Bartica Regional Hospital. However a more sustainable procurement system is needed.

At the national level, GSIP has been invited to be a partner of the National Waste Management Oversight Committee, chaired by the Minister of Health and the Director of Environmental Health. The Committee is tasked with looking at medical waste in general including setting and overseeing standards, procedures and construction. GSIP has contributed its knowledge and experience; and provided a draft standard operating procedure manual to assist facilities to follow safe practices and is working with the Committee to strengthen the national guidelines for medical waste. The approval process is dependent on the meeting schedule of the Committee.

GSIP has been successful in building partnerships to complement our capacity building efforts; this has been especially true in the area of medical waste management. The US Embassy Humanitarian Assistance Programme, in consultation with CDC, identified the need for improved waste management capability at select health care facilities. CDC asked GSIP to give further guidance on the needs and selection criteria; the identified sites were also reviewed and approved by the Oversight Committee. HAP provided the funds for the construction of two Demonfort incinerators, one at Bartica Regional Hospital in region # 7 and the other at Port Mourant Regional Hospital in region # 6.

Bartica's incinerator was finally condemned when the chimney broke off and cracks occurred, causing an environmental hazard when lit. The hospital resorted to burning waste in a pit, which flooded in the rainy season. The Demonfort should provide a safer, more environmentally friendly method for infectious waste and sharps disposal.



The old Bartica Hospital Incinerator



Filled burn pit at Bartica Hospital

GSIP has advised the hospital to develop a partnership with the NDC to remove its non-infectious waste and use the newly built incinerator for the infectious and sharps medical waste.

The Port Mourant Hospital has been renovated and converted to the National Eye Care Centre of Guyana but without upgraded final disposal facilities. It relied on a dilapidated burn box for medical



Condemned incinerator at Port Mourant Hospital

waste and transported its sharps waste to the New Amsterdam Hospital. The increase in patients projected at the National Eye Care Centre will lead to more medical and sharps waste, making transporting sharps costly. The Demonfort will provide an onsite solution. In both cases, the incinerators will be able to take on sharps waste generated from surrounding health facilities.

Although needle removers have played a major role in containing sharps and have been resoundingly supported by facility staff and regional administrators, PAHO raised the issue that they were not approved by WHO and that they may result in accidental spillage of vaccination residue. PAHO through the Expanded Programme on Immunization (EPI) supports the Public Health facilities, where the majority of the needle removers were placed. The Ministry issued a directive to have the regions remove the needle removers. Controversy over the decision by staff, facilities and regions remains and GSIP will monitor the situation while assisting the affected facilities to find effective means of sharps disposal.

The pneumococcal vaccine being trialed in Guyana is provided by PAHO in glass syringes which pose a challenge for safe disposal. WHO has taken an active role in identify solutions at the global level and the WM Oversight Committee is struggling with the issue in Guyana. GSIP will review its training curricula and SOPs to include guidance on disposal, once strategies are determined.

Procurement and Logistics

A new system for ordering products has evolved under the partnership between MMU and SCMS. GSIP has revised the Ordering and Storage Guidelines to guide facilities on the new system. These guidelines were provided to pharmacists and other individuals in charge of storage and reordering in Regions 3 and 4 during training of these individuals. The guidelines are intended to assist facilities in ordering both GSIP-funded and MOH-funded safer injection products.

The National Formulary Committee mandated the Chief Pharmacist to produce a National Medical Supply List that reflects the need of health care facilities. The list was compiled in collaboration with the Chief Pharmacist, GSIP and SCMS and technical working groups who identified the categories of supplies needed at all levels. . GSIP supplied the procurement unit of MOH/MMU with specifications for all IS supplies using data collected to estimate average monthly consumption during the SCMS quantification exercise. The Chief Pharmacist will submit the list to the National Formulary Committee; it will be used to purchase medical supplies for next year.

GSIP is weaning facilities from GSIP supply and encouraging them to use consumption data to budget and order safety boxes, PPE and bin liners. To date, region 10 Public Health sector has assumed purchasing of bin liners; Region 6 has assumed purchasing of PPE and bin liners for both the hospitals and health centers and Region 5 is purchasing black liners for Maichony Hospital. The process of budget assumption is ongoing.

GSIP improved health worker safety with the introduction of Vanish Point safety syringes at high risk wards at two facilities. The GPHC Infectious wards, Accident and Emergency Unit and the Out Patient Clinic along with the West Demerara Hospital Infectious Wards and Out Patient Clinic are currently testing these syringes. The distribution process will be monitored to

ensure that the syringes remain in the designated units and accurate consumption figures are established to provide management with figures to guide purchases.

Using Buffer Stock to Address Stockouts

The project in its early stages made the strategic decision to procure a buffer stock of standard disposable syringes in sizes 2cc, 5cc, 10cc and 20cc to guard against the uncertainty of stock availability at the MMU and, thus help avoid stockouts at healthcare facilities. This was largely based on the poor procurement and distribution of stock by MMU at project start-up. Improvements in the warehousing and distribution practices during the past two years have changed the general availability of syringes at the MMU but stockouts remain an issue during the testing of the MOH/SCMS strategy.

Stockouts can be attributed to a number of factors, including poor internal logistics systems, ordering lapses, distribution delays and intermittent non-availability of central stock. The project has begun distributing the remaining buffer stock to hospitals, whose historic stock balance level shows shortages in syringe stock levels, every two months over a six month ordering cycle. The re-order/distribution plan will ensure that two months' buffer of each size standard disposable syringe will reside at each of the hospitals, to avoid stockouts of standard disposable syringes until, at least, project end by which time the MOH system should provide the long-term solution. GSIP will monitor facility need and use of syringes during this time period.

BCC /Media

BCC Assessment

An assessment was designed to determine the reach and usefulness of existing BCC approaches to inform their improvement and expansion to new sites. It was meant to add qualitative insight to the quantitative results of the midterm facility assessment, which measures adherence to standards and practices. Results from the quantitative assessment were presented to health and sanitation staff during focus group discussions, to seek their interpretation of why certain “negative” behaviors were observed.

The main areas of investigation included:

- a) knowledge, attitudes and behavior, and relation of BCC activities to changes in injection-related practices;
- b) sources of information utilized;
- c) messages retained and reactions to them.

Four interviewers conducted a total of 13 focus groups with key target audiences purposively selected: health workers and sanitation staff, and in Region 6 with Waste Management Implementation Teams (WITs), and community members reached by the WIT teams. A total of 99 people participated.

Key results include:

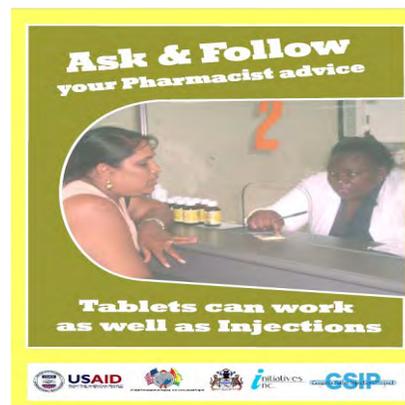
1. GSIP training and BCC materials and activities have been effective. Staff knows what to do to protect themselves and they feel.

2. A number of barriers to recommended behaviors reduce regular practice, including lack of water, or hand sanitizers, understaffing and lack of PPE or failure to wear same, fear of injections,
3. Injection safety training improved attitudes of health workers, especially because staff believes that someone (GSIP) cares about their well-being and led to better relations between nurses and sanitation staff at HC in both regions and in hospitals in Region 10.
4. Training and BCC materials are generally appreciated and relevant.

The full study will be shared with stakeholders in Guyana to broaden the understanding of factors that facilitate and impede safer practices.

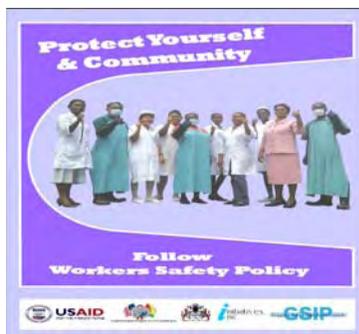
Development of IEC materials

GSIP has supported the MOH in the development of two new posters. One of the posters supports compliance to the worker safety policy and the other encourages patient adherence to oral medication. Both posters have been approved by the Ministry of Health and upon completion of production they will be distributed at all health facilities. Regional Consultants and all GSIP staff will via training and monitoring visits orient HCWs to understand and use poster messages and provide guidance for their placement.



Policy Dissemination

Since the Ministry of Health passed the healthcare safety policy in December 2007, GSIP has supported the Ministry with the implementation of an advocacy and dissemination plan. To date 266 management staff and HCWs from the various sectors have benefited from training sessions to help them understand and implement the policy. Supervisors at HCs have also been instrumental in conducting orientation sessions on the policy, the initiative is ongoing.



Policies have been posted at facilities in Regions 3, 4, 5, 6, 7 and 10. As GSIP/MOH implements its strategy in new regions, the same approach will be used. The major challenge to the implementation of the policy continues to be the lack of systemic support to ensure compliance with the policy.

Sharing of Best Practice

GSIP is working to identify and promote sharing of best practices among peers. The following story highlights how Regional Health Officers can improve vaccination coverage.

Protecting Health Care Workers: Pre Exposure Prophylaxis Strategies used in Region 10

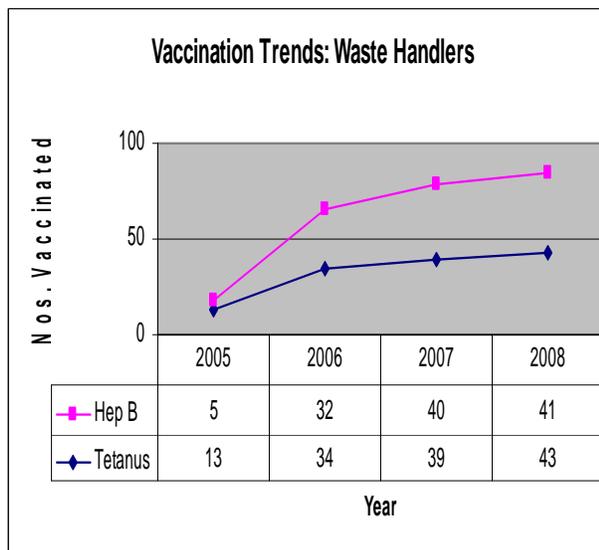
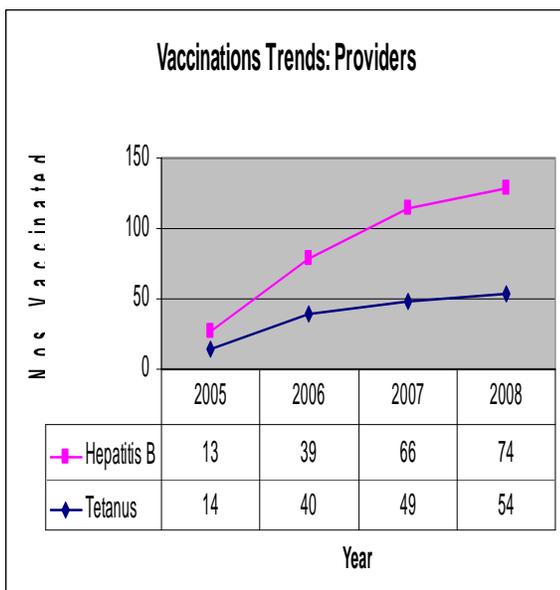
The Ministry of Health launched the Health Care Worker Safety Policy in December 2007. The policy was designed to sensitize administrators and health care workers on key measures to reduce occupational exposure to the transmission of blood borne diseases through needle stick injury. Regional Health Officers were tasked with the responsibility for disseminating this policy at health facilities within their various regions. Region 10 efforts were commendable.

RHO Dr Pansy Armstrong, presented her strategy (July, 2008) to the biannual statutory meeting of RHOs. Her approach included group sessions with different categories of staff to discuss the policy and issuance of personal policy copies to staff members. As a result, workers became more aware of measures needed to protect themselves from occupational exposure to needle sticks.



Dr Armstrong at biannual meeting of RHO

The most challenging element of the policy was getting workers to comply with the need for pre-exposure hepatitis B and tetanus vaccination. This was addressed through efforts of senior health management officers; the Public health sector and Linden Hospital Complex collaborated, sharing resources and establishing a statutory date for staff vaccinations.



Vaccination trends amongst providers and waste handlers between 2005 and 2008

The passage of the worker safety policy has been touted as a critical push factor for a safer health environment. Strategies like that of Region 10 encourage proactive action on the part of HCWs to protect

themselves against blood borne pathogens. Sharing this success helps other regions to design their own solutions to facilitate a transformation in the safety of the health workforce in the not too distant future.

Prescription Record Review Interventions (PRR)

As a follow up to the first phase of the PRR, GSIP tested a strategy to increase adherence to prescriptions by training pharmacists on medication counseling and developing a formulary handbook as a job aid for assistants. The success of the pilot led GSIP to work with the Guyana Pharmacy Council and the Chief Pharmacist to provide training to pharmacists on rational drug use.



Pharmacists role play patient counseling for medication adherence

The training objectives were to increase pharmacist ability to follow pharmaceutical supply guidelines and to increase skills in medication counseling, and as a result prescription adherence. To date 154 pharmacists and pharmacy assistants have participated in training on medication adherence and logistics. Pharmacists are integral to our team approach, providers, prescribers and pharmacists working in parallel and partnership to improve rational drug use.



Section of pharmacists at CE Regency Suites

Partnerships

With the support of GSIP, a partnership has been fostered between the Ministry of Health and the Ministry of Labor (MOL). This has resulted in the Director of Standard and Technical Services Unit (STSU) supporting the training of 17 Labor Occupational Safety Health officers in injection safety and waste management and the health care worker safety policy to help them monitor the policy at health facilities. The MOL is working to finalize mechanisms to monitor healthcare facilities and eventually turn their efforts to the private sector.

SCMS has been a close partner of GSIP/MOH initiative to promote rational drug use, assisting in training sessions for pharmacists and pharmacy assistants on - *Medication Counseling for Patient Adherence to Orals and Logistics for Drug management*. The collaboration has worked well for both agencies in their endeavor to promote rational drug use. GSIP will continue working with the Chief Pharmacist to ensure that pharmacists and pharmacy assistants are trained and supported to utilize their new skills in their work practice.

Pharmaceutical Advisor SCMS leads session for pharmacy assistants



Nurses and Regional Consultants conduct Patient Education Sessions

Patient education is an important aspect of injection safety and waste management. As a part of their training, providers and prescribers are reminded that patient involvement is essential in promoting injection safety. As a result, nurses with the support of GSIP staff have been proactive in conducting patient education sessions. To date more than 300 patients have benefitted from these sessions and the work is reaching into the wider community as health care workers are making presentations for civil society groups.

Monitoring and Supervision

GSIP has used injection safety as a conduit to build MOH supervisor capacity to effectively monitor and supervise systems, services and individuals. The supervisors are identified and trained to do monitoring, first jointly with regional consultants or GSIP staff, and then independently. They are provided with a checklist to monitor staff practices and taught how to interpret and use the results for improvements. GSIP also uses a verification tool to monitor IS indicator achievements at the facility level and address gaps. Data from monitoring is entered into a data base and is evaluated by project staff on a regular basis. On a quarterly basis, this evaluation is shared with senior management for problem solving. To date supervisors are able to conduct proper supervision and approximately 50% of those trained are using monitoring tools to monitor IS practices. Efforts are taken to have the supervisors not only collect but analyze the data; progress is gradual based on supervisor understanding and management commitment.

However:

- Monthly reports are received from each region on provider practices and waste management practices.
- Some supervisors are discussing the findings from monitoring with their staff and are preparing graphs depicting findings.
- In Region 3, the matron took responsibility for both distribution and collection of the monitoring tools and has requested assistance in strengthening their existing monitoring tool; GPHC is also requesting help in this area.
- The midterm assessment found a 52% increase in the number of staff who reported their supervisors discussed performance with them.

With the new push for quality standards and health facility licensing by the Ministry, there is a plan for establishing Quality Improvement Committees for select regions or hospitals that can address problems beyond injection safety. GSIP is working with the Minister and the STSU to set quality standards and a process for recognizing facilities that achieve standards.

Evaluation

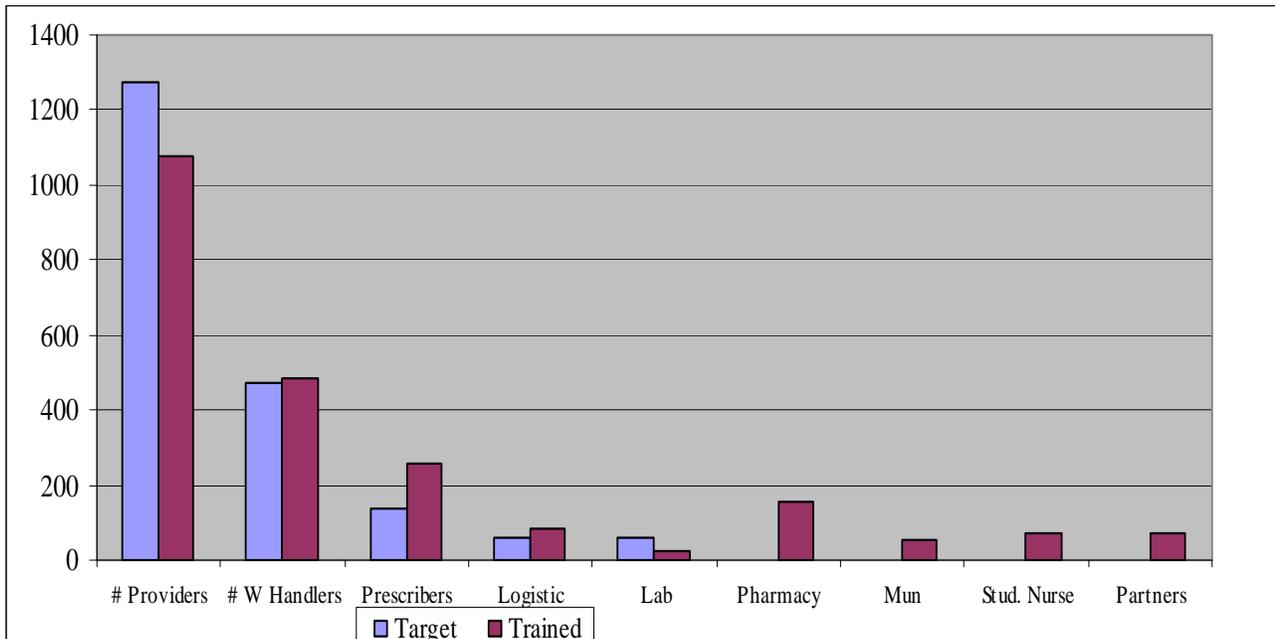
Midterm Assessment: GSIP is using the findings from the February 2008 midterm assessment to adjust our strategy. We will develop refresher training to reach regions completed in GSIP's first years to both address new staff and remind older staff about the importance of safer practices. Supervisors will also be targeted to improve monitoring. Efforts to relook at the WM facility plans will be made to accommodate infrastructure and staff changes at the facilities.

The BCC assessment findings will also factor into an approach that focuses on improving adherence to IS/WM standards

PEPFAR Reporting Indicator: Training of Staff

Using the MOH human resource data, we documented the number trained against the number of staff per cadre. In addition to facility staff, GSIP trains municipal waste carriers, student nurses, and medex and participates in training conducted by our partners to emphasize standard precautions, PEP and injection safety. To date we have trained over 2000 staff in provider and waste management practices, rational drug use, logistics and supervision. .

Cumulative Training 2004-2008



NEXT STEPS

- Capacity Building
 - Job aids and curricula to be formatted and officially handed over to MOH.
 - Integration of training into pre-and in-service training programs and efforts to strengthen delivery of material will continue.
 - Best Practices mini-conferences will be designed to encourage peers to share successes.
 - Refresher training will be designed and local capacity/system created for continual use

- Waste Management
 - GSIP will work with the WM Oversight Committee to finalize standard operating procedures and guidelines for sharps waste management at facility and national level.
 - Follow up for Needle Remover placement outside of Guyana

- Using Data for Decision Making
 - GSIP will work with the Ministry to implement the demonstration pilot IS certification process and review findings for scale up and input to MOH licensing process
 - Efforts will continue to strengthen use of data at facility, region and national level.
 - Findings from PRR and Insulin study will be shared with MOH to influence policy, procurement and procedures
 - Demonstration study linking employee motivation and performance and retention will in collaboration with MOH be designed, implemented and analyzed

- Procurement
 - GSIP will continue supplying consumption data to inform budgets for IS/WM equipment and PPE, bin liners and safety boxes.
 - Landscape vendor package developed by PATH for Guyana will be shared with management to assist procurement

- RDU
 - GSIP will assist in disseminating standard treatment guidelines (STGs) favoring non-injectables, once completed

Annex One: M&E Plan

**Performance Indicators:
Guyana Safer Injections Project (GSIP) ⁵**

						GSIP PILOT		GSIP EXPANSION				
#	CODE	INDICATOR	INDICATOR DEFINITION	DATA SOURCE	NATIONAL BASELINE 2004	GSIP BASE-LINE 2004	GSIP ACTUAL 2005	2007	INTER-MEDIATE 2008		FINAL 2009	
								A	T	A	T	A
1. Project Coverage												
1.1	P	Percent of population covered by SI in the regions and nationally ²	Number of population covered/total number of population in the region and country	Project Records / National Census Reports		ND		45%	60%	86%	100%	
1.2a	P	Coverage of facilities providing safe injections	Proportion of facilities covered by SI in project regions vs. all facilities providing injections in project regions	Project Records		0	14	-94% (15 hosp) -99% (73 HC) -66% (33 HP)	80% 80% 40%	100% (17 hosp) 98% (100 hc) 85% (59 hp)	100% ³ 100% 50%	

⁵ **Table Key:** A = Actual; GAIS = Guyana AIDS Indicator Survey; P = PEPFAR; S = Supplementary; T = Target; HF = Health Facility; ND = No Data

² These data will also be reported in annual reports from 2006 through 2009.

³ Targets relate to hospitals 100%, health Centers 100% and health posts 50%.

1.2b	P	Regions covered by the project	Number of regions covered by the project	Project Records			ND	5		6		
1.3	P	Presence of national policy	Policy document highlighting injection safety and waste management submitted to relevant authorities and operationalized	Project Records		0	Drafted & sent for final approval	Policy Approved & Disseminated 2008				
1.4	S	National SI plan	Existence of plan with designated activities to improve the safety of injection and waste disposal practices	Project Records		0	0	Expected draft 2008				

						GSIP PILOT		GSIP EXPANSION				
#	CODE	INDICATOR	INDICATOR DEFINITION	DATA SOURCE	NATIONAL BASELINE 2004	GSIP BASELINE 2004	GSIP ACTUAL 2005	GSIP BASELINE March 2006	INTER - MEDIATE 2008		FINAL 2009	
									T	A	T	A
2. Reducing Unnecessary Injections, Advocacy and Behavior Change												
2.1	P	Average number of injections per person per year ⁴	Average number of annual medical injections reported by the population(15-49)	GAIS	.95 = GAIS				.95	X ⁶	.95	
2.26	P	Average number of injections per patient per a specific diagnosis	Number of injections given per patient per a specific diagnosis or symptom : PAIN and Headache	Record Audit at Sentinel Sites		ND	ND	Headache 5/14 or 36% Pain 17/42 or 41%	1.1 1.0	Head ache: 0/6 cases or 0% Pain 2/19 cases or 11%		
2.3a	P	BCC Messages reaching clients	Number of patients who have heard or seen BCC messages related to injection safety/Total number of patients interviewed	HF Survey	ND	ND	16% (n=58)	17% (n=52)	30%	43% (n=76)	47%	

⁴ Data will be collected in 2007 when the GAIS is scheduled to be conducted and will be included in the 2008 intermediate evaluation report.

⁶ GAIS survey is to be included in the DHS; USAID date for DHS completion is not determined

						GSIP PILOT		GSIP EXPANSION				
#	CODE	INDICATOR	INDICATOR DEFINITION	DATA SOURCE	NATIONAL BASELINE 2004	GSIP BASELINE 2004	GSIP ACTUAL 2005	GSIP BASELINE March 2006	INTER-MEDIATE 2008		FINAL 2009	
									T	A	T	A
3. Standards and Training												
3.1	P	Percentage of facilities where sharps are observed to be re-used on patients without reprocessing	Number of injection observations where sharps are observed to be reused on patients without reprocessing/ Total number of observations of injections	HF Survey	0% (n=51)	0% (n=14)	0% (n=10)	0% (n=22)	0%	0% (n=31)	0%	
3.2	S	Injection Provision Standards available	Number of facilities in which procedures for injection safety are posted/total number of facilities surveyed	HF Survey	22% (n=37)	22% (n=14)	67% (n=14)	20% (n=10)	90%	100% (n=17)	99%	
3.3	S	PEP Standards	Proportion of facilities in which procedures for PEP are posted	HF Survey	14% (n=36)	14% (n=14)	100% (n=14)	70% (n=10)	90%	100% (n=17)	99%	

#	CODE	INDICATOR	INDICATOR DEFINITION	DATA SOURCE	BASELINE 2004	ACTUAL 2005	2006		2007		2008		2009	
							T	A	T	A	T	A	T	A
3.4	P	National Policy Implementation	Number of persons trained in safe injection policies and related issues	Project Records	0	0	30	45	ND	54 249	150	266	35	
3.5	P	Number of persons Trained Commodity Management (CM)	Number of persons trained	Project Records	ND	46	100	5** 192*	50** 300*	23** 333*	15 ⁷ 500 ⁸	16 538	25	
3.6	P	Injection Providers trained	Number of providers trained in injection safety	Project Records	0	103	200	192	300	333	500	560 ⁹	360	
3.7	P	Number of persons trained in interpersonal communication/ BCC regarding safe injections	Number of persons Trained	Project Records	0	237	360	286	450	472	600	538	405 ₁₀	
3.8	P	Number of staff trained in waste management	Number of staff trained	Project Records	3	78	160	94	150	139	100	207	45	
3.9	S	Number of physicians trained in reducing injections	Number of trained	Project Records	ND			100	125	99	75	61	110	

⁷ Refers to dedicated logistics staff

⁸ Refers to all providers as they are trained in logistics for ordering on the ward

⁹ Includes 22 laboratory staff

¹⁰ Covers all waste handlers and providers

						GSIP PILOT		GSIP EXPANSION				
#	CODE	INDICATOR	INDICATOR DEFINITION	DATA SOURCE	NATIONAL BASELINE 2004	GSIP BASELINE 2004	GSIP ACTUAL 2005	GSIP BASELINE March 2006	INTER-MEDIATE 2008		FINAL 2009	
									T	A	T	A
4. Equipment, Supplies and Commodity Management												
4.1	P	Number/percent of facilities with stock-outs of any size of new sterile standard or safety syringes in prior six months	Number of supervisors interviewed who report stock outs of any size of new sterile standard or safety syringes in the prior 6 months/ Total number of supervisors interviewed	HF Survey			27% (n=15)	40% (n=10)	20%	6% (n=31)	10%	
4.2	P	Number/percent of facilities with stock outs of safety boxes for sharps disposal in the prior six months	Number of supervisors interviewed who report stock outs of safety boxes in the prior 6 months/ Total number of supervisors interviewed	HF Survey			27% (n=15)	10% (n=10)	15%	10% (n=31)	10%	
5. Sharps Waste Management												
5.1	P	Number/percent of health workers that dispose of used sharps in a safety box or puncture-proof, leak-proof sharps container (or use a needle remover) immediately after injection	Number of health workers observed giving injections who dispose of used sharps in a safety box or puncture-proof, leak-proof sharps container (or use needle remover) / Total number of health workers observed giving injections	HF Survey	100% (n=30)	14% (n=11)	86% (n=10)	64% (n=22)	85%	96% (n=24)	100%	

						GSIP PILOT		GSIP EXPANSION				
#	CODE	INDICATOR	INDICATOR DEFINITION	DATA SOURCE	NATIONAL BASELINE 2004	GSIP BASELINE 2004	GSIP ACTUAL 2005	GSIP BASELINE March 2006	INTER-MEDIATE 2008		FINAL 2009	
									T	A	T	A
5.2	P	Proportion of facilities with satisfactory disposal of used injection equipment (no used sharps where they pose a needle stick risk for providers or the general population either inside or outside the facility and no overflowing or open safety boxes)	Number of facilities with satisfactory disposal of used injection equipment (no used sharps where they pose a needle stick risk for providers or the general population either inside or outside the facility and no overflowing or open safety boxes)/ Total number of facilities surveyed.	HF Survey	82% (n=38)	77% (n=14)	86% (n=14)	100% (n=9)	85%	94% (n=17)	96%	
5.3	P	Number/percent of facilities using safety boxes for sharps waste disposal	Number of facilities using safety boxes for sharps waste disposal/ Total number of facilities surveyed	HF Survey	ND	ND	100% (n=14)	80% (n=10)	75%	100% (n=14)	99%	

						GSIP PILOT		GSIP EXPANSION				
#	CODE	INDICATOR	INDICATOR DEFINITION	DATA SOURCE	NATIONAL BASELINE 2004	GSIP BASELINE 2004	GSIP ACTUAL 2005	GSIP BASELINE March 2006	INTER-MEDIATE 2008		FINAL 2009	
									T	A	T	A
6. Infection Prevention and Control												
6.1	P	Number/proportion of facilities providing post-exposure prophylaxis (PEP) to its staff (medical staff and waste handlers) who have sharps injuries	Number of facilities that have a system in place to offer post exposure prophylaxis within 24 hours to its staff after sharps injuries or blood borne pathogen exposure/ Total number of facilities	HF Survey	20% (n=51)	21% (n=14)	87% (n=14)	80% (n=10)	85%	100% (n=17)	99%	
6.2	P	Percent of men/women (15-49) who report that the most recent health care injection was given with a syringe and needle from a new, unopened package	Proportion of women and men ages 15-49 who report that the most recent health care injection was given with a syringe and needle set from a new, unopened package	GAIS		87%	91.45%	81% (n=52)	90%	X ⁸	95%	

⁸ GAIS survey is to be integrated into DHS for Guyana, date of the survey is not available yet.

						GSIP PILOT		GSIP EXPANSION				
#	CODE	INDICATOR	INDICATOR DEFINITION	DATA SOURCE	NATIONAL BASELINE 2004	GSIP BASELINE 2004	GSIP ACTUAL 2005	GSIP BASELINE March 2006	INTER - MEDIATE 2008		FINAL 2009	
									T	A	T	A
6.3	P	Number and percent of facilities that reprocess and re-use syringes and needles (including sterilization and high-level disinfection)	Number of facility observations where there is evidence of syringes and needles being reprocessed and re-used/ Total number of observations of facilities	HF Survey	0% (n=51)	0% (n=14)	0% (n=10)	0% (n=10)	0%	0% (n=31)	0%	
6.4	P	Number/percent of health workers who dispose of used sharps without recapping	Number of health workers observed giving injections who disposed of used needles without recapping/ Total number of health workers observed giving injections	HF Survey	8% (n=38)	92% (n=14)	100% (n=10)	100% (n=22)	95%	90% (n=31)	100%	

						GSIP PILOT		GSIP EXPANSION				
#	CODE	INDICATOR	INDICATOR DEFINITION	DATA SOURCE	NATIONAL BASELINE 2004	GSIP BASELINE 2004	GSIP ACTUAL 2005	GSIP BASELINE March 2006	INTER-MEDIATE 2008		FINAL 2009	
									T	A	T	A
6.5	P	Number/percent of health workers who give each injection with a new sterile standard or safety syringe	Number of health workers observed giving injections with a new sterile standard or safety syringe/ Total number of health workers observed	HF Survey	87% (n=38)	100% (n=14)	100% (n=10)	82% (n=22)	95%	97% (n=31)	100%	
6.6	P	Number/Percent of injection providers reporting one or more needle stick injuries in the prior six months	Number of injection providers who report one or more needle stick injuries in the prior 6 months/total number of injection providers interviewed	HF Survey	26% ⁵ (n=31)	22% (n=14)	20% (n=25)	17% (n=22)	20%	3% (n=31)	10%	
6.7	P	Number/percent of waste handlers reporting one or more needle stick injuries in the prior 6 Months	Number of waste handlers reporting one or more needle stick injuries in the prior 6 months/ Total number of waste handlers interviewed	HF Survey			0% (n=19)	33% (n=12)	25%	9% (n=23)	10%	

⁵ The national baseline and GSIP data are based on a 12 month period rather than 6 months. The 2006 GSIP baseline will collect data based on the last 6 months.