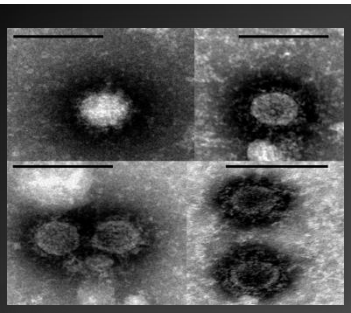
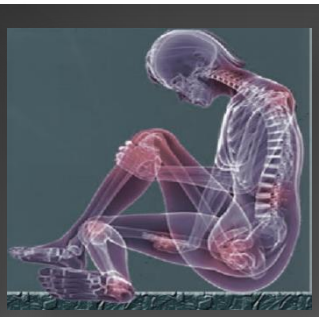

Preparedness and Response Plan for Chikungunya Virus Introduction in the Caribbean sub-region

Prepared by a group of international experts and health professionals at the Chikungunya Caribbean sub-regional meeting in Kingston , Jamaica 2012.

Preparedness and Response Plan for

Chikungunya Virus

Introduction in the Caribbean sub-region

Photo: Experts and participants from 22 countries at the

"Caribbean Sub-regional Training Workshop. Introducing the new guidelines: Preparedness and Response for Chikungunya Virus Introduction in the Americas in the context of Dengue"

The Jamaica Pegasus Hotel, Kingston, Jamaica.
May 28 – 30, 2012

Pan-American Health Organization
Washington, DC
2013

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A. Introduction

Chikungunya fever (CHIK) is an emerging, mosquito-borne disease caused by an *alphavirus*, Chikungunya virus (CHIKV). The disease is transmitted predominantly by *Aedes aegypti* and *Ae. Albopictus* mosquitoes, the same species involved in the transmission of dengue.

Traditionally, CHIKV epidemics have shown cyclical trends, with inter-epidemic periods ranging from 4 to 30 years. Since 2004, CHIKV has expanded its geographical range, causing sustained epidemics of unprecedented magnitude in Asia and Africa. Although areas in Asia and Africa are considered to be endemic for the disease, the virus produced outbreaks in many new territories in the Indian Ocean islands and in Italy. This recent reemergence of CHIKV has heightened the world's public health awareness and concern about this virus.

Although indigenous transmission of CHIKV does not occur in the Americas now, the risk for its introduction into local vector mosquito populations is likely higher than had previously been thought, especially in tropical and subtropical areas where *Ae. aegypti*, one of the main vectors of CHIKV, has a broad distribution. There is an intense travel/cultural exchange between the Caribbean and Chikungunya virus (CHIKV) endemic countries, such as India and other Asian countries. This fact put the Caribbean as one of the most vulnerable sub-regions in the Americas.

Most of the countries and other territories in this sub-region of the Americas are relatively small islands, which makes disease containment a possibility. The effectiveness of these measures will depend on the early detection and diagnosis of indigenous CHIKV transmission. Aggressive vector control coupled with quarantine (i.e., travel restrictions) has the potential to limit the spread of CHIKV in the Region.

Given these factors, the Pan American Health Organization (PAHO), with the support of the Division of Vector-Borne Diseases of the United States Centers for Disease Control and Prevention (DVBD, CDC), supported the first Caribbean Sub-regional training workshop for Preparedness and Response for Chikungunya Virus Introduction in the Americas in the context of dengue (Annex 1: Agenda).

With participants from 22 countries, including clinicians, vector control teams and laboratory technicians, the objective of the meeting was to train public health staff from

the Caribbean countries on the detection, diagnosis, clinical management, and prevention of Chikungunya (CHIK) and dengue (DEN) viruses' infections.

The objective of the meeting was to raise the capacity of Caribbean countries' health systems for the timely identification of CHIK outbreaks in the context of other epidemic prone diseases, such as dengue.

Experts from France, USA, Puerto Rico, Colombia, and El Salvador gave training in clinical management of CHIK cases, laboratory diagnostic, risk communication and vector control.

As one of the products of the meeting, the participants elaborated a draft preparedness, control, and response plan for CHIK outbreaks in the Caribbean sub-region, focused in 3 main components clinical management and epidemiology, laboratory diagnostic and vector control.

B. Immediate Actions to be taken

The participants of the meeting suggested that, in order to make this plan effective, the following actions should be taken:

- ✓ PAHO will communicate with Ministries of Health to convey the importance of preparing for the introduction of CHIK.
- ✓ Participants of the training course will promote sensitization of Senior Health Staff at the country level (Minister, CMO, PS).
- ✓ Each country Ministry of Health will review existing plans and develop country-specific programs based on the framework developed at meeting.
- ✓ Each country Ministry of Health will evaluate the capacity of current dengue surveillance and response programs as a background for CHIKV introduction.

For more information about CHIKV please consult the: "Preparedness and Response for Chikungunya Virus Introduction in the Americas" guideline. Available at: ***http://new.paho.org/hq/index.php?option=com_content&view=article&id=6464%3Apaho%2C-cdc-publish-guide-on-preparing-for-chikungunya-virus-introduction-in-the-americas&catid=740%3Anews-press-releases&Itemid=1926&lang=en***

C. Framework for Preparedness Plan for CHIK Outbreak Control

1. CLINICAL MANAGEMENT

Expected Result	Indicators
Patient care services of the Caribbean Sub-region prepared for early detection and reporting of suspected cases of CHIK and management according to guidelines.	• 100% of countries in the Caribbean Sub-region with CHIK preparedness plan adapted to their health system. • Number of suspected CHIKV cases detected and reported according to IHR. • 100% of all stakeholders informed about CHIK preparedness plan and a core group of leaders trained in the management of CHIK cases within 1 year. • 100% of countries with a contingency plan for organization of health services.

Clinic Activities	Tasks	Responsible Persons / Organizations
<u>Phase 1: Preparedness</u> **1. Adapt the Caribbean Sub-regional preparedness plan for CHIK outbreaks**	a. Read and then discuss the Caribbean Sub-region preparedness plan for CHIK outbreaks with the MOH and medical leaders, and then discuss plan with the national emergency committee.	CMO/Public health designee
	b. Create national preparedness plan for CHIK outbreaks according to the country situation with the input from all stakeholders.	Public health officials National health disaster coordinators
	c. Disseminate the preparedness plan for CHIK outbreaks to stakeholders.	CMO Public health officials
2. Training for clinical staff on all aspects of CHIK management.	a. Organize training for all healthcare providers/professionals on the management of suspected CHIK cases. Consider training on CHIK when giving seasonal updates on the management of dengue.	Experts Clinicians trained on CHIK guidelines Public Health officials

Clinic Activities	Tasks	Responsible Persons / Organizations
	b. Organize workshops for public health officials and personnel at all points of entry to include quarantine and immigration officials about the CHIK preparedness plan and compliance with IHR regulations.	Public Health officials
	c. Include CHIK in the curriculum of health professionals.	Training institutions CMO
	d. Monitor and evaluate knowledge of health professionals.	CMO/MOH Professional associations CME bodies
<u>Phase 2: Established outbreak</u> **1. Organize patient care services**	a. Determine and establish the baseline infrastructure of healthcare facilities to support a CHIK outbreak.	CMO, PS, Medical Directors, Public Health Officials
	b. Review and adapt the patient care protocol and create a critical route flowchart of CHIK patients.	CMO, Senior Clinicians
	c. Conduct triage to optimize resources and reduce morbidity in high risk patients (pregnant women, underlying diseases, elderly)	Trained health care professionals
	d. Mobilize additional resources (medication, bed nets, personnel, transportation) as necessary.	CMO, PS Public Health officials National Disaster Leaders
<u>PHASE 3: End of the outbreak</u> **1. Analyze the actions taken during the outbreak**	a. Maintain the monitoring and evaluation activities. b. Conduct after-action evaluations to identify and remedy gaps in the country surveillance and response program.	MOH National Laboratory Reference Lab: CAREC, CDC- Puerto Rico, CDC Fort Collins, Pasteur Institute. IHR national focal point PAHO
<u>PHASE 4: Endemic seasonal transmissions</u> **1. Maintain the surveillance activities**	a. Establish a regular, integrated surveillance program. b. Re-visit activities in Phase 1 to assure preparedness is maintained.	MOH IHR national focal point PAHO

2. EPIDEMIOLOGIC SURVEILLANCE

Expected Result	Indicators
CHIK Epidemiological Surveillance system for timely alert and opportune response implemented.	• CHIK surveillance systems in place (e.g., Lab data, clinical data, entomological data) • Number of sites at the country level with the information about CHIKV • 100% of CHIK outbreaks reported according to IHR guidelines.

Epi Activities	Tasks	Responsible Persons / Organizations
<u>Phase 1: Preparedness</u> **1. Strengthen the epidemiological surveillance system for CHIK in the countries of the Caribbean Sub-region**	a. Include CHIK as part of Disease Surveillance System – Class 1 disease (reported within 24hrs of suspicion). b. Standardize a CHIK case definition (clinical and epidemiological) based on PAHO-CDC guidelines. c. Set up clinical and epidemiological surveillance in the countries Caribbean Sub-region. d. Standardize the methods used to determine the criteria (clinical, epidemiological and laboratory) to confirm the start of a CHIK outbreak in the Caribbean Sub-region.	CMO CAREC Multidisciplinary group, (epidemiology, clinical, laboratory)
<u>Phase 2: Established outbreak</u> **1. Confirmation/Declaration of the beginning of an outbreak**	a. Classify cases as locally-acquired or imported cases. b. Notify the National and international Epidemiological Focal Points according to IHR. c. Enhance clinical and epidemiological surveillance system in the countries of the Caribbean Sub-region as needed.	CMO Epidemiologists CAREC
2. Monitor and assess the epidemic situation	a. Activate and maintain the national and regional situation rooms/coordination mechanisms. b. Establish routine communication mechanisms with relevant national and international organizations and network	CMO, National Health Disaster Coordinators, CAREC, CDEMA CMO, CAREC, PAHO, CDC Epidemiologists

Epi Activities	Tasks	Responsible Persons / Organizations
	of experts (clinical, laboratory, epidemiology, vector and outbreak response). c. Analyze and interpret weekly data and develop a daily and weekly outbreak report. d. Provide support and technical assistance to affected countries.	PAHO, CAREC, CDC and other countries
<u>PHASE 3: End of the outbreak</u> **2. Analyze the actions taken during the outbreak**	c. Maintain the monitoring and evaluation activities. d. Conduct after-action evaluations to identify and remedy gaps in the country surveillance and response program.	MOH National Laboratory Reference Lab: CAREC, CDC-Puerto Rico, CDC Fort Collins, Pasteur Institute. IHR national focal point PAHO
<u>PHASE 4: Endemic seasonal transmissions</u> **2. Maintain the surveillance activities**	c. Establish a regular, integrated surveillance program. d. Re-visit activities in Phase 1 to assure preparedness is maintained.	MOH IHR national focal point PAHO

3. LABORATORY COMPONENT

Expected Result	Indicators
Laboratory capacity is strengthened to support surveillance and outbreak investigation for a timely response to clinicians and public health officials.	• Number of laboratories referring samples of CHIK suspected cases to CAREC & CDC • Number of laboratories that have access to molecular testing through reference laboratories for CHIKV diagnostic. • Number of laboratories participating in external quality control programs for CHIK diagnostic

LAB Activities	Tasks	Responsible Persons/ Organizations
<u>PHASE 1: Preparedness</u> **1. Establish communication channels within the national authorities.**	a. Establish a lab team: define the roles and responsibilities of the staff in preparedness for a CHIK outbreak. b. Establish the communication channels within the national lab network and outside the lab (clinicians, epidemiologist and public health) in the country. c. Set up communication between the lab, the MOH and the IHR National focal point in the country. This is the official channel to contact international experts to support an outbreak. d. Harmonize the plan between hospitals, clinicians, public health, vector control and social communication. e. Run a simulation exercises for the whole country.	Ministry of Health Chief of the National Laboratory
2. Prepare the national and reference laboratories with supplies and reagents for CHIKV diagnosis.	a. Mobilize funding from national & international sources. b. Establish a triage of how many samples will be tested. c. Prepare the logistics for procurement and distribution of supplies, sample collection and sample transport internally and internationally. d. Establish agreements with reference labs to identify where the samples will be sent (CAREC/CDC- Puerto Rico/CDC Fort Collins/ Pasteur Institute)	National Laboratory Reference Lab: CAREC, CDC- Puerto Rico, CDC Fort Collins, Pasteur Institute. PAHO

LAB Activities	Tasks	Responsible Persons/ Organizations
	e. Ensure reference laboratories maintain adequate stock of reagents, supplies and equipment for CHIKV diagnosis.	
3. Training workshops for CHIV testing	a. Conduct workshops for training in performance of CHIKV diagnostic tests in a reference lab and replicate this training in the national lab. b. Set up the CHIKV testing capacity in laboratories (ELISA test, PCR, PRNT as appropriate for the laboratory capacity). Evaluate laboratory performance with external proficiency tests and internal quality control. c. Prepare and conduct a yearly proficiency test for the national and reference participant's labs. d. Ensure that appropriate diagnostic tests are available to identify other diseases in the differential diagnosis, depending on the country and clinical presentation (undifferentiated febrile syndromes: malaria, dengue, leptospirosis, West Nile.) See Table 3 in the CHIKV guideline.	Reference Lab: CAREC, CDC- Puerto Rico, CDC Fort Collins, Pasteur Institute National Lab
<u>PHASE 1A: First suspected case</u> **1. Detection, sampling & report of the first suspected cases**	a. Physicians report suspect cases to the public health, epidemiology and lab departments b. Review case reports do determine if imported or local case, in order to select the appropriate test algorithm. c. Ensure that required information is provided with sample (clinical-epidemiological information, days post onset of fever/severe joint pain, travel information). d. Ensure the correct sample is provided to the laboratory (serum) and request a second sample to provide paired sera (acute and convalescent) to allow confirmation of test results. e. Aliquot the sample, ensure enough volume for the entire test algorithm is sent to a reference lab, with all of the required case information, to allow independent confirmation of results. f. Ensure sample is appropriately packaged	MOH National Laboratory Reference Lab: CAREC, CDC- Puerto Rico, CDC Fort Collins, Pasteur Institute. IHR national focal point

LAB Activities	Tasks	Responsible Persons/ Organizations
	for shipping and that archived specimens are appropriately stored. .Notify the reference lab about sample shipment and the priority g. Test suspected case samples in the lab the sample for dengue, leptospirosis, malaria and CHIKV h. Report the results to the physician, epidemiology and public health departments.	
	i. Report confirmed and presumptive CHIKV positive test results to PAHO through the IHR national focal point the suspected case.	
PHASE 2: Established outbreak **1. Test selected samples**	a. Establish a triage of how many samples will be tested. b. Test all hospitalized severe cases c. Test all fatal cases (heart blood). d. Appropriately prepare and store samples that will not be tested immediately, and assure that all clinical epidemiological data are available for the samples e. Send severe and fatal case samples to the reference lab	MOH National Laboratory Reference Lab: CAREC, CDC- Puerto Rico, CDC Fort Collins, Pasteur Institute. IHR national focal point
PHASE 3: End of the outbreak **3. Analyze the actions taken during the outbreak**	e. Maintain the monitoring and evaluation activities f. Conduct after-action evaluations to identify and remedy gaps in the country surveillance and response program.	MOH National Laboratory Reference Lab: CAREC, CDC- Puerto Rico, CDC Fort Collins, Pasteur Institute. IHR national focal point PAHO
PHASE 4: Endemic seasonal transmissions **3. Maintain the surveillance activities**	e. Establish a regular surveillance (Lab and epidemiology) program f. Ensure adequate supply of laboratory reagents, review laboratory quality control results, conducted needed training. g. Re-visit activities in Phase 1 to assure preparedness is maintained.	MOH National Laboratory Reference Lab: CAREC, CDC- Puerto Rico, CDC Fort Collins, Pasteur Institute. IHR national focal point PAHO

4. VECTOR CONTROL COMPONENT

Expected Result	Indicators
Integrated Vector management for CHIKV prevention and control implemented to reduce vector populations.	• IVM organization structure is functional and supported. • Number of training courses in IVM delivered. • 100% availability of training manuals developed and adapted to the country level • Baseline data of Entomological indicators in all regions

Vector Activities	Tasks	Responsible Persons/ Organizations
PHASE 1: Preparedness **1. Establish systematic vector surveillance plan for control, previous an outbreak**	a. Review the legislative framework for vector control and breading sites control in the civil population. b. Increase country co-operation for Vector Control. c. Forge Strong communication links with Public Health/ Clinicians/ Epidemiology/ Education and Promotion. d. Review Vector Surveillance System against set objectives • Install a good Data Collection routine with the ability to make decisions in an appropriate and timely manner. • Determine frequency of survey eg. every 3 month • Determine sampling framework. • Identify key containers and key premises. e. Determine hotspots for CHIK/dengue transmission based on High *Aedes aegypti* infestation levels, Ecological indicators & Epidemiological data. f. Implement control measures in a no CHIK and low dengue scenario including Community Mobilization/Education and source reduction/Larval control. g. Establish Inventory Management System for	Ministry of Health Chief of the National Vector control unit

Vector Activities	Tasks	Responsible Persons/ Organizations
	vector control including inventory of Chemical, Equipment and Resource. h. Conduct training workshops for staff (based on identified gaps). i. Develop vector control response and communication plan, describing increasing control activities based on epidemiological situation. j. Implementation routine Insecticide Resistance Monitoring Program with CAREC support. k. Establish collaboration mechanism with stakeholders eg. Solid Waste management.	
PHASE 1A: First suspected case	a. Activate Emergency Response Plan based on epidemiological situation b. Notify entire system and put system on alert c. Implement enhanced vector control in areas with transmission based on entomological and epidemiological data	Ministry of Health Chief of the National Vector control unit
PHASE 2: Established outbreak	a. Expand adulticide applications and larval management programs in identified transmission hotspots	Ministry of Health Chief of the National Vector control unit
PHASE 3: End of the outbreak & **PHASE 4: Endemic seasonal transmissions**	a. Re-visit activities in Phase 1 to assure preparedness is maintained.	Ministry of Health Chief of the National Vector control unit

Annex 1 – Agendas

Caribbean Sub-regional Training Workshop

Introducing the new guidelines:

Preparedness and Response for Chikungunya Virus Introduction in the Americas in the context of Dengue

The Jamaica Pegasus Hotel, Kingston, Jamaica
May 28 – 30, 2012

General Objective

- Using the new Chikungunya (CHIK) guidelines, train public health staff from the Caribbean countries on the detection, diagnosis, clinical management, and prevention of CHIK in the context of dengue virus (DENV) infections.

Specific Objectives

1. Initiate the implementation in the Caribbean subregion of the new guidelines: Preparedness and Response for Chikungunya Virus introduction in the Americas.
2. Implement the new dengue clinical management guidelines in Caribbean countries.
3. Train health care workers in the health services (clinicians, nurses and epidemiologists) to respond and cope with outbreaks by CHIK and DEN viruses.
4. Elaborate country-specific draft preparedness, control, and response plan for CHIK outbreaks in the Caribbean subregion.

Justification

- This is one of the "train the trainers" workshops on the new guidelines: "Preparedness and response for Chikungunya Virus Introduction in the Americas" . This activity has already been carried out in other sub-regions of the Americas. The same methodology used in previous sub-regions will be applied, which is based on the contents of the new CHIKV guidelines.
- To raise the capacity of Caribbean countries' health systems for the timely identification of CHIK outbreaks in the context of other epidemic prone diseases, such as dengue. The Caribbean sub-region is the most vulnerable in the Americas for *Aedes aegypti* transmitted diseases because of high vector infestation rates, and fragile and unprepared health systems.
- There is an intense travel/cultural exchange between the Caribbean and CHIK endemic countries, such as India and other Asian countries.
- Most of the countries and other territories in this sub-region of the Americas are relatively small islands, which makes disease containment a possibility. Aggressive vector control coupled with quarantine (i.e., travel restrictions) has the potential to limit the spread of CHIK in the Region. The effectiveness of these measures will depend on the early detection and diagnosis of indigenous CHIKV transmission.
- The participation of the Dengue Branch and the Arboviral Diseases Branch of the CDC Division of Vector Borne Diseases in this workshop constitutes an opportunity to promote the technical cooperation between the CDC's two WHOCCs and Caribbean

Countries leading to improvement of arbovirus surveillance, prevention, diagnosis, and outbreak response capacities.

Expected Results (Workshop Outcomes)

1. National multidisciplinary health teams provided knowledge to identify CHIKV introductions in the context of endemic dengue.
2. Healthcare services organized to respond to outbreaks and health care workers able to manage patients with CHIK.
3. Training manual for CHIK distributed.
4. Country-specific draft response plans for CHIK preparedness, outbreak control, and response in the Caribbean sub-region following the International Health Regulations (IHR 2005).

AGENDA

Monday, May 28, 2012 - CHIKUNGUNYA			
HOUR	**ACTIVITY**		**Lecturer**
08h00min-8h30min	**REGISTRATION**		
08h30min-9h00min	Inauguration ceremony • Welcome words by Dr. Margareta Sköld Representative, Jamaica PAHO/WHO. • Acknowledgment words by Dr. Roger Nasci, Chief CDC-Fort Collins, USA • Official inauguration of the meeting by the Representative of the Ministry of Health, Jamaica		
9h00min - 9h15min	Presentation of the participants		Olivia Brathwaite, MSc
9h15min - 9h30min	**COFFEBREAK**		
9h30min - 9h45min	Introduction: General aspects of CHIK New Guideline content		Dr. Roger Nasci
9h45min -10h45min	CHIK Epidemiology & Physiopathology		Dr. Fabrice Simon
10h45min – 11h00min	Questions		
11h00min – 11h15min	Introduction: CHIK Lab Diagnosis		Dr. Ann Powers
11h15min – 11h30min	Introduction: *Aedes ae.* control		Dr. Roberto Barrera
11h30min – 12h00min	**Discussion, questions, and observations**		
12h00min-13h00min	**LUNCH**		
	Working Groups		
	CLINICAL GROUP	**LABORATORY**	**ENTOMOLOGY GROUP**
13h00min – 15h30min	CHIK Case identification and management; cases discussion ***Moderators: Clinical case management Team***	Lab techniques for CHIK diagnosis; laboratory preparedness and response Differential diagnostics with other disease. Quality control ***Moderators: Laboratory Team***	**Training session at the MOH Vector control Program:** Evaluation of Vector control programs. Best practices for *Aedes aegypti* control. ***Moderators: Vector control Team***
15h30min – 15h45min	**COFFEBREAK**		
15h45min–17h30min	**Continue working groups.**		**Back to the hotel (18h00)**
19h30min – 22h00min	**Welcome dinner**		

Tuesday, May 29, 2012 - DENGUE			
HOUR	**ACTIVITY**		**Lecturer**
8h30min – 9h00min	Dengue epidemiology		Dr. José Luis San Martin
9h00min – 9h45min	Dengue Physiopathology		Dr. Kay Tomashek
9h45min – 10h15min	Dengue laboratory diagnostics		Dr. Elizabeth Hunsperger
10h15min – 10h30min	**COFFEBREAK**		
	Working Groups		
	CLINICAL GROUP	**LABORATORY GROUP**	**ENTOMOLOGY GROUP**
10h30min – 12h30min	Discussion of dengue clinical case management ***Moderators:*** ***Clinical case management Team***	Discussion of laboratory diagnostics and laboratory preparedness ***Moderators: Laboratory Team***	Vector control during outbreaks ***Moderators:*** ***Vector control Team***
12h30min – 13h30min	**LUNCH**		
13h30min – 15h00min	Continue working groups.	Continue working groups.	Continue working groups.
15h00min – 15h15min	**COFFEBREAK**		
15h15min – 17h45min	**Country presentations** 1. **Jamaica experience for dengue control** (15 min). 2. **Curacao experience during dengue outbreak** (15 min) 3. **Bahamas experience:** Country response during DEN outbreaks: Health services organization and vector control (15 min). 4. **French territories': Plan for the prevention and control of the introduction of the CHIKV in the French territories** (15 min). 5. **Cayman island experience in vector control** (15 min). ➢ **Discussion, questions, and observations. Selection of expected results per component.**		

Wednesday, May 30, 2012 – OUTBREAK RESPONSE			
HOUR	**ACTIVITY**		**Lecturer**
8h00min – 8h15min	Introduction: Risk Communication during outbreaks		Monica Prado
8h15min – 9h15min	**Working groups** Draft Plan: Preparedness for outbreak control, sample movement and testing, and response plan for CHIK in the Caribbean sub-region: Expected results and indicators.		
	Clinical group **Rappourter:** **Diana Rojas**	**Lab group** **Rappourter:** **Olivia Brathwaite**	**Vector control group** **Rappourter:** **Monica Prado**
9h15min – 9h30min	**COFFEBREAK**		
9h30min – 11h30min	**Continue Working groups** Draft Plan: Preparedness for outbreak control, sample movement and testing, and response plan for CHIK in the Caribbean sub-region: Activities and tasks.		
	Presentation and discussion of the proposal per group.		
11h30min – 12h00min	**Clinical group**		Participant
12h00min – 12h30min	**Lab group**		Participant
12h30min – 13h00min	**Vector control group**		Participant
12h45min – 13h00min	**Closing of Training workshop**		Dr. Roger Nasci Dr. Jose Luis San martin Dr. Pedro Más Bermejo
13h00min – 14h00min	**LUNCH**		

AGENDA – CLINICAL GROUP

Monday, May 28, 2012 - CHIKUNGUNYA			
13h00min - 13h45min	CHIK case #1	**Presentation and discussion**	Fabrice Simon
13h45min – 14h30min	CHIK case #2		
14h30min – 15h30min	CHIK case #3		
15h30min – 15h45min	**COFFEBREAK**		
15h45min – 16h15min	Presentation: How to organize the clinical services during CHIK outbreaks		Fabrice Simon
16h15min – 16h45min	Presentation: How to organize the clinical services during DEN outbreaks.		Gabriela Marón
16h45min – 17h30min	Discussion with participants: Organization of clinical services during CHIK and DEN outbreaks		Clinical team
Tuesday, May 29, 2012 - DENGUE			
10h30min – 11h30min	DEN Clinical case #1	**Presentation and discussion**	Kay Tomashek
11h30min – 12h30min	DEN Clinical case #2		Gabriela Maron
12h30min – 13h30min	**LUNCH**		
13h30min – 14h15min	DEN Clinical case #3	**Presentation and discussion**	Kay Tomashek
14h15min – 15h00min	DEN Clinical case #4		Gabriela Maron
15h00min – 15h30min	Discussion: Main points to be included in a CHIK/DEN Preparedness plan – patient care component		Diana Rojas
15h30min – 15h45min	**Coffee break**		
15h45min – 17h45min	Country presentations		
Wednesday, May 30, 2012 – OUTBREAK RESPONSE			
8h00min – 11h30min	**Draft Plan:** Preparedness for outbreak control, sample movement and testing, and response plan for Chikungunya in the Caribbean sub-region: expected results, indicators, Activities and tasks.		Diana Rojas Fabrice Simon
11h30min – 12h45min	**Presentation and discussion of the proposal per group.**		Participant
12h45min – 13h00min	Closing of Training workshop		
13h00min – 14h00min	**LUNCH**		

AGENDA – LABORATORY GROUP

Monday, May 28, 2012 - CHIKUNGUNYA		
13h00min - 13h30min	Sample collection, storage and transportation for serology, viral isolation and molecular diagnostic	A Powers
13h30min – 13h45min	Lab techniques for CHIK diagnosis: Serology	A Powers
13h45min – 14h15min	Lab techniques for CHIK diagnosis: rt-PCR	*A Powers*
14h15min – 14h45min	Lab techniques for CHIK diagnosis: Viral isolation	*A Powers*
14h45min – 15h00min	Differential diagnostics with other disease	*A Powers*
15h00min – 15h30min	**COFFEBREAK**	
15h30min – 17h00min	Discussion: Laboratory preparedness and response during CHIK outbreaks	Group

Tuesday, May 29, 2012 - DENGUE		
10h30min – 11h30min	Overview of dengue virus diagnostics	L. Hunsperger
11h30min – 12h00min	Comparison of assays including: DEN Rapid test NS1 test	L. Hunsperger
12h00min – 13h30min	**LUNCH**	
13h30min – 15h30min	Discussion: Laboratory preparedness and response during DEN outbreaks	Group
15h00min – 15h30min	**Coffee break**	
15h30min – 17h45min	Country presentations	

Wednesday, May 30, 2012 – OUTBREAK RESPONSE		
8h15min – 11h30min	**Draft Plan:** Preparedness for outbreak control, sample movement and testing, and response plan for Chikungunya in the Caribbean sub-region: expected results, indicators, Activities and tasks.	
11h30min – 12h45min	**Presentation and discussion of the proposal per group.**	
12h45min – 13h00min	Closing of Training workshop	
13h00min – 14h00min	**LUNCH**	

AGENDA – VECTOR CONTROL GROUP

Monday, May 28, 2012 - CHIKUNGUNYA		
13h00min - 13h30min	Transfer to MOH Vector office	
13h30min – 13h45min	Objectives of the entomology working group Best practices for vector control	Dr. Roger Nasci
13h45min – 15h45min	IVM Vector control organization and activities in the participating countries – Resource inventory ***Guided discussion based on the questionnaire***	Dr. Chris Frederickson Vector control Team
15h45min – 16h00min	**COFFEBREAK**	
16h00min – 16h15min	Update on Vector surveillance techniques and identification of high risk areas	Dr. Roberto Barrera
16h15min – 18h00min	Field demonstration of surveillance tools	Vector control Team
18h00min	Transfer to the hotel	

Tuesday, May 29, 2012 - DENGUE		
10h30min – 11h00min	Vector control new tools	Dr. Roberto Barrera
11h00min – 11h30min	Vector control supervision, monitoring and evaluation program	Dr. Chris Frederickson
11h30min – 12h00min	Vector control activities during outbreaks	Dr. Roger Nasci
12h00min – 12h30min	Discussion	
12h30min – 13h30min	**LUNCH**	
13h30min – 15h30min	Discussion: Preparedness for outbreak control and response for Chikungunya in the Caribbean sub-region: Selection of expected results & indicators	Moderator: Dr. Chris Frederickson & Vector control Team
15h30min – 15h45min	**Coffee break**	
15h45min – 17h45min	Country presentations	

Wednesday, May 30, 2012 – OUTBREAK RESPONSE		
8h15min – 11h30min	**Draft Plan:** Preparedness for outbreak control, sample movement and testing, and response plan for Chikungunya in the Caribbean sub-region: expected results, indicators, Activities and tasks.	Vector control Team
11h30min – 12h45min	**Presentation and discussion of the proposal per group.**	
12h45min – 13h00min	Closing of Training workshop	
13h00min – 14h00min	**LUNCH**	

Annex 2 - List of participants

Caribbean Sub-regional Training Workshop Introducing the new guidelines: Preparedness and Response for Chikungunya Virus Introduction in the Americas in the context of Dengue			
KINGSTON, JAMAICA - 28 AL 30 DE MAYO 2012			
LIST OF PARTICIPANTS			
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2013