Guyana Vaccination Plan for the Influenza Pandemic

Prepared by Maternal and Child Health/Expanded Programme on Immunization
Ministry of Health

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Introduction

Pandemic H1N1 Situation

The Pandemic Influenza A (H1N1) virus has spread rapidly to countries of the world after being first identified in Mexico in March, 2009. With the global spread of this new virus, the World Health Organization (WHO), declared Pandemic Phase 6 on June 11, 2009. As of October 11, 2009, according to the WHO report there were over 399,232 laboratory confirmed cases of Pandemic Influenza a (H1N1), and over 4,735 deaths. The WHO region of the Americas, where the Pandemic Influenza A (H1N1) virus was first identified, has reported 160, 129 cases from 35 countries, with 3,539 deaths reported from 26 countries as of October 16, 2009. Fifty percent (50%) of the reported deaths were from 2 countries.

The countries of the Caribbean community (CARICOM) identified the first cases of the Pandemic Influenza A (H1N1) virus in May, 2009. As of October 7, 2009, there have been 978 laboratory confirmed cases of Pandemic Influenza A (H1N1), reported from 20 of 21 CAREC member countries and 157 hospitalized cases from 10 countries. Five countries reported a total of 10 deaths. Hospitalized cases and deaths were found to occur in persons who had underlying medical conditions and/or were obese or pregnant.

As of the 1st week of October 2009, forty-nine (49) suspected cases were treated, and 17 cases confirmed. Efforts are continuing to strengthen surveillance in all areas in order to identify and manage cases very early and consequently decrease the spread of the virus. Transmission of the Pandemic influenza A (H1N1) virus is now established in several coastal and populated areas in Guyana.

Risk of the Disease

The risk of severe disease from pandemic influenza virus is high and with the virus now firmly entrenched in countries, the risk that more human cases will occur will persist. Each additional human case gives the virus an opportunity to improve its transmissibility in humans.

In many countries the pandemics has caused large surges in the number of people requiring or seeking medical or hospital treatment, temporarily overwhelming health services. High rates of worker absenteeism are occurring in some countries and this has the potential to interrupt essential services, such as law enforcement, transportation, and communications. Because populations will be fully susceptible to the Pandemic H1N1 virus, rates of illness could peak fairly rapidly within a given community and result in local, social and economic disruptions. The disruption can be amplified in today's closely interrelated and interdependent systems of trade and commerce. Several groups of persons such as young children, elderly, persons with co-morbidities and pregnant women are more vulnerable to the virus and would develop more severe form of the disease.

In the view of the facts as stated above, WHO has advised that countries prepare their national plans including vaccination to prevent a disaster.

The Vaccination Programme

Influenza vaccination has been very effective in preventing deaths and complications from the disease, however, the current vaccine influenza vaccine has not been found to prevent the pandemic influenza. Guyana has had experience in doing mass vaccination of adults and children and in 2000, 650,000 persons were vaccinated with MMR and yellow fever vaccines, that is over 80% of the population. In 2009, after the receipt of 30,000 doses of influenza vaccine PAHO facilitated donation) the Ministry of Health successfully vaccinated over 29,000 adults and children in less than a month. Therefore implementing mass vaccination with pandemic influenza H1N1 vaccine for selected target populations is feasible and would be successful.

Prior to the beginning of activities a chronogram of activities together with logistics will be prepared to guide the implementation of the programme.

Goal

To prevent mortality and morbidity from pandemic influenza (H1 NI) disease and minimize transmission of the virus within the Guyanese population.

In order for this to be achieved there will be

1) Prioritization of the population to be vaccinated.
2) Establish target for these vulnerable groups and the rest of the population.
3) Estimate vaccine needs and funding.
4) Selection of the type of vaccines and organization of procurement.
5) Implementing of pandemic influenza vaccination activities and of enhancing surveillance for adverse events
6) Regular reporting on vaccination activities
7) Enhanced disease surveillance and monitoring adverse events reports
8) Promote social mobilization including mass media activities for the public prior to and during the vaccination programme.

Priority groups and targets for vaccination

WHO has prioritized key groups for the H1N1 vaccine as health workers (both frontline and auxiliary), pregnant women and individuals with chronic illnesses such as diabetes, hypertension etc. Guyana Ministry of Health has identified children less than 5 years as a further key priority group. See Table 1.

Table 1 Target population for H1 N1 Vaccines

Target population for vaccination	Estimated population
Health workers (frontline health workers)	3,000
Auxiliary health workers(frontline health workers)	2,000
Pregnant women	14,000
Persons with chronic illnesses include all underlying medical conditions	40,000
*Children under 5 years (6 months to 4 years)	100,000
Total	**159,000**

*Children under 5 years will require two doses of the inactivated vaccines

Vaccine needs for the population

One dose of vaccine per person is recommended for adequate protection against H1 N1 virus in high risk situations for the population 10 years and older. The population 6 months through 9 years will require 2 doses of the vaccines.

Table 2 Vaccines estimates for H1 N1 vaccines

Target population for vaccination	Funding source	Vaccine cost
Priority groups Health workers, pregnant women, chronic illnesses and vulnerable children (under 5) #64,976	WHO donation	$60,794,462
Priority groups All other children (under 5) #94,024	Government and other agencies	$72,471,774
Total **#159,000**		**$168,445,801**

Selection of the type of vaccine to be used

The vaccine type that would be preferred is the inactivated pandemic H1N1 vaccine. Vaccines are usually procured through the PAHO Revolving Fund.

Influenza Vaccination and monitoring of adverse events

The staff at the health centres would be responsible for vaccination of the persons in their communities. These centres would be opened beyond normal working hours.

Health teams would be organized to go to set up mobile clinics or visit designated locations to do the vaccinations. Region 4 is the most populated area of the country and the suggested vaccination sites are:

1) Ministry of Health, Brickdam, Play Ground
2) City Constabulary Building
3) East Coast (to be selected)
4) East Bank (to be selected)

Reporting

Reporting data on vaccination administered will be done on the routine forms for the children under 5 years and over 5 years in the Family Immunization Register. The following data would be recorded name, age, date of birth, date vaccine administered,

batch number and manufacturer with appropriate use of the remarks column. This data would be complied on the routine immunization forms and sent to the Medical Officer, Maternal and Child Health Department. All precautions, according to the EPI protocols, and as in mass vaccinations, will be observed.

Vaccine Strategies

- Each region will be responsible for all the priority groups within their catchment.
- The target population will be determined within each region.
- The staff at the health centers would be responsible for vaccination of the persons in their communities (all priority groups)
- These centers would be opened beyond normal working hours.
- Special arrangements would be made to vaccinate persons with chronic illnesses

Management and surveillance of Adverse Events

All health workers should manage adverse events of clients according to the MCH/EPI protocols. There would be adequate preparation at all hospitals and health centres to manage adverse events. All adverse events should be recorded on the “EPI adverse event forms” and reported within 24 hours to the MCH Officer, Maternal and Child Health Department.

Social Mobilization

A Sub- National Committee established has been established at the national level. The media sensitization sessions has been initiated. A fact sheet will be prepared for the health workers on Influenza HINI. This will be used to sensitised health workers prior to the vaccine administration

General and targeted social mobilization activities will be done for the general public and priority groups in order to ensure maximum participation by all.

Monitoring and Evaluation

Monitoring and Evaluation of this vaccination exercise will be done on a continuous basis. This will be the responsibility of the MCH staff. Weekly meetings will be held initially and then frequency will be altered according to needs and progress of the activities. Reports of the meetings will be sent to the Chief Medical Officer. On completion of all activities, a final report with post mortem findings and lessons learned will be done.

Proposed Budget for the Influenza Pandemic Vaccination

Three budget tables set out the proposed cost for the influenza pandemic action plan for Guyana. They identify two alternative scenarios. Note all costs and funding given in Guyanese Dollars.

Scenario 1

The first is the proposed budget for deploying and vaccinating the priority population using only the WHO donated vaccine doses (75,000). This scenario gives the vaccines to 64,976 individuals including 5,000 health workers, 14,000 pregnant women and 40,000 with chronic illnesses. The remaining vaccines will be sufficient for only 5,976 children under the age of 5 to be fully vaccinated hence 94,024 children will be left without the H1N1 vaccination. The national budget required for this is G$4,800,000. See table 3.

Scenario 2

The second is the proposed budget for deploying and vaccinating the complete priority population using both WHO donated vaccine doses (75,000) and additional vaccines (197,450) purchased from the Revolving Fund. This scenario gives the vaccines to 159,000 individuals including all those vaccinated under scenario 1 and a further 94,024 children under 5. The national budget required for this is G$77,271,774. See table 4.

Table 3 75,000 Vaccines Donated by WHO

Activity	Cost	WHO funding	National extra-budgetary funding	PAHO/ UNICEF/ GAVI funding
Organization and Management	$300,000	$0	$300,000	$0
75,000 Vaccines	$60,794,462	$60,794,462	$0	$0
Tactics for delivery to priority groups	$1,800,000	$0	$0	$1,800,000
Human Resource Logistics	$1,200,000	$0	$1,200,000	$0
Cold Chain Needs	$700,000	$0	$700,000	$1,500,000
Waste Management Needs	$200,000	$0	$200,000	$0
Total	**$68,044,462**	**$60,944,462**	**$4,800,000**	**$3,300,000**

Table 4 272,450 Vaccines reaching Total Priority Group

Activity	Cost	WHO funding	National extra-budgetary funding	PAHO/ UNICEF/ GAVI funding
Organization and Management	$300,000	$0	$300,000	$0
272,450 Vaccines	$161,195,801	$60,794,462	$72,471,774	$0
Tactics for delivery to priority groups	$1,800,000	$0	$0	$1,800,000
Human Resource Logistics	$1,200,000	$0	$1,200,000	$0
Cold Chain Needs	$700,000	$0	$700,000	$1,500,000
Waste Management Needs	$200,000	$0	$200,000	$0

Total	**$168,445,801**	**$60,944,462**	**$77,271,774**	**$3,300,000**

These two scenarios differ in their cost and target audience. Table 5 summarizes.

Table 5 Summary

Activity	Number Vaccinated	Cost	WHO funding	National extra-budgetary funding	PAHO/ UNICEF/ GAVI funding
Scenario 1 Priority groups 75,000 Vaccines	64,976	$68,044,462	$60,794,462	$4,800,000	$3,300,000
Additional Additional children under 5 197,450 Vaccines	94,024	$72,471,774	$0	$72,471,774	$0
Scenario 2 Priority groups and children under 5 272,450 Vaccines	159,000	$168,445,801	$60,794,462	$77,271,774	$3,300,000

Please note that the Ministry of Health has not budgeted for this money in its program. Therefore, extra-budgetary funds will have to be solicited.