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**RAPID ASSESSMENT OF ATTITUDES
AND UNDERSTANDING RELATED TO**

2009 H1N1

PANDEMIC INFLUENZA IMMUNIZATION

Study conducted on behalf of AED by

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SUMMARY OF KEY FINDINGS

This was a qualitative study of attitudes and understanding related to 2009 H1N1 pandemic influenza immunization. The study was conducted in Nairobi from October 29th to November 28th, 2009. The study sample comprised 14 pregnant women, 10 people with chronic diseases (2 with tuberculosis, 3 with HIV and 5 with diabetes), 10 health workers (five each from clinics attended by pregnant women and chronic disease clinics) and six (6) stakeholders drawn from professional medical associations, relevant government ministries, Nairobi City Council, University and a public health research organisation.

Awareness of 2009 H1N1 pandemic influenza and vaccine

All of the respondents in the four categories were aware of 2009 H1N1 pandemic influenza, its acquisition, transmission and non-pharmaceutical prevention measures. None of the pregnant women, 3 patients with chronic diseases, 6 health workers and 3 stakeholders were aware of the existence of a vaccine against 2009 H1N1 pandemic influenza and its use, especially in developed countries. Information about both H1N1 influenza and vaccination against it were acquired primarily through the mass media.

Perception of risk and willingness to receive vaccination

All of the health workers interviewed recognised that they were at risk of 2009 H1N1 pandemic influenza because of contact with patients. All pregnant women also recognised their risk to the disease because of their suppressed immunity. All the persons with chronic diseases equally recognised their risk for H1N1 influenza due to underlying chronic health conditions that had weakened their immunity. All pregnant women and those with chronic diseases said they would be willing to receive the vaccine if it was recommended by their healthcare provider, approved by the government and did not pose any danger due to ongoing medications, especially among those with chronic health conditions. Seven of the ten health workers said they would be willing to be vaccinated but the other three were reluctant. One of the healthcare workers who expressed her reluctance to be vaccinated noted that there had been no H1N1-associated deaths reported in the country and that some people had survived the disease without vaccination, hence vaccination of all healthcare workers against the virus did not appear warranted. The other explained that viruses usually mutate rapidly and a vaccine may not remain protective long enough to warrant vaccination of health workers.

Perceived problems with vaccination of pregnant women and people with chronic diseases

Health workers as well as stakeholders did not perceive any potential problems with vaccination of pregnant women and people with chronic diseases. But information on benefits and safety were seen as important to the acceptance of the vaccine among the targeted groups. Also noted was the importance of involving male partners through information about the vaccine and its safety, especially in the case of pregnant women. Pregnant women themselves said they foresaw no problem with the vaccine as long it was recommended by the Ministry of Health and had no side effects for themselves or their unborn child. Additional issues raised especially among people with chronic illnesses were the need for an assurance that the vaccine would not make them sicker, the importance of addressing attitudes especially among older patients who are usually resistant to introduction of new or change of treatment regimens and information that vaccine is not contraindicated for the other medications they were already using. Both stakeholders and health workers observed that the trust and confidence between pregnant women and health care providers would enhance pregnant women's acceptance of the vaccine while among people with chronic illnesses, government approval of the vaccine was mentioned as a key determinant of willingness to be vaccinated.

Preparation required by health workers to provide the vaccine

Targeted training on preparation, handling and administration and factual information on safety and effectiveness of the vaccine were identified as critical to the preparation of health workers to provide the vaccine. Also emphasised was the importance of addressing health workers' attitudes towards the vaccine so they can use it themselves and promote its use among targeted high-risk groups.

SECTION I: BACKGROUND

1.1. INTRODUCTION

The United States and several other industrialised countries are working with World Health Organisation (WHO) to financially and technically support 2009 H1N1 pandemic influenza vaccination of health workers and pregnant women in some developing countries. This endeavour involves the use of a new product (2009 H1N1 pandemic influenza vaccine) against a relatively new public health hazard that may be somewhat unfamiliar to the target groups. Given the urgency of the epidemiologic situation, a non-routine style of service delivery will be employed to reach large numbers of people in a short period of time. There is only limited experience with immunizing health workers in developing countries. Regarding pregnant women, there is a long history of immunizing them with tetanus toxoid. Periodically and in multiple countries, however, allegations have arisen that vaccination of pregnant women is a veiled attempt to sterilise them. These rumours have proven very damaging to immunization efforts and, in some places, have persisted for several months before being resolved.

Taken together, these issues constitute a cluster of concerns that should be explored in order to develop effective communication strategies to support 2009 H1N1 pandemic influenza immunization. Kenya's Ministry of Public Health and Sanitation has identified the following groups to be targeted for 2009 H1N1 vaccination with the first batch of vaccine to be received from WHO and other development partners.

- Health workers.
- High-risk groups with suppressed immunity – tuberculosis (TB) and diabetes patients and HIV-infected persons.
- Pregnant women.

A rapid assessment of beliefs and values relating to 2009 H1N1 pandemic influenza and its vaccination was, therefore, conducted in Nairobi among a select number of pregnant women, health workers in clinics attended by pregnant women, people with chronic diseases and health workers in chronic disease clinics and other stakeholders. The assessment was conducted from October 29th to November 28th, 2009.

1.2. OBJECTIVES OF ASSESSMENT (BY PARTICIPANT GROUP)

Pregnant women:



- Describe their understanding and perceptions of 2009 H1N1 pandemic influenza and vaccination against it.
- Identify the advantages, for themselves, their child, and their families, of 2009 H1N1 pandemic influenza vaccination.
- Describe their concerns about H1N1 vaccine and vaccination.
- Identify the types of information about 2009 H1N1 pandemic influenza vaccination that they would like to receive, and from whom they would like to receive it.
- Identify any obstacles to getting vaccinated against 2009 H1N1 pandemic influenza.

People with chronic diseases



- Describe their understanding and perceptions of 2009 H1N1 pandemic influenza and vaccination against it.
- Identify the advantages, for themselves and their families, of 2009 H1N1 pandemic influenza vaccination.
- Describe their concerns about H1N1 vaccine and vaccination.
- Identify the types of information about 2009 H1N1 pandemic influenza vaccination that they would like to receive, and from whom they would like to receive it.
- Identify any obstacles to getting vaccinated against 2009 H1N1 pandemic influenza.

Health workers:



- Describe their understanding of 2009 H1N1 pandemic influenza and perceptions of their personal risks from the disease as health care providers.
- Give their opinions on receiving vaccination against 2009 H1N1 pandemic influenza.
- Give their opinions on vaccinating pregnant women and people with chronic diseases with 2009 H1N1 pandemic influenza vaccine.
- Describe their perceptions and possible reasons why pregnant women, people with chronic diseases and their families might accept or not accept the vaccine.
- Describe their own reactions to the concerns that pregnant women, people with chronic diseases and their families might express about the vaccine.
- Identify the types of information that they would like to receive to help them to respond to the concerns of pregnant women, people with chronic diseases and their families.

Stakeholders:



- Describe their understanding of 2009 H1N1 pandemic influenza and vaccination against it.
- Give their opinions about 2009 H1N1 pandemic influenza vaccination, including their perceptions of benefits and concerns about it.
- Describe possible reasons why pregnant women, people with chronic diseases and health workers might accept or not accept the vaccine.
- Identify the types of information they would like to receive to address these concerns.
- Suggest effective ways of communicating to health workers, pregnant women, people with chronic diseases and their families, and the community at large about 2009 H1N1 pandemic influenza vaccination.

1.3. METHODOLOGY

To gain an understanding of attitudes, beliefs and values (and to a lesser extent, knowledge), the exercise was a rapid qualitative assessment using mostly open-ended questions. This type of inquiry was necessary to uncover underlying concerns to address in planning both the supply and demand aspects of the H1N1 vaccination campaign. Fourteen (14) pregnant women, ten (10) people with chronic diseases and ten health workers (5 from general clinics attended by pregnant women and 5 from special clinics for people with chronic diseases - one (1) each from a TB clinic, an HIV comprehensive care centre (CCC) and a general casualty unit and two (2) from a diabetes clinic) were recruited for the assessment. The study respondents were recruited from Langata and Kariobangi public health centres, under the Nairobi City Council's management, and Mbagathi District and Mathari Teaching and Referral, both Government hospitals, in Nairobi. Kariobangi health centre, located in the eastern side of Nairobi, serves largely low-income communities from the surrounding slum settlements. Langata health centre, located in the southern part of Nairobi, has catchments of a mixture of low- and middle-income groups. Both Mbagathi and Mathari hospitals serve patients from diverse backgrounds, from both within Nairobi and surrounding suburbs. Additionally, key stakeholders were identified from relevant government ministries, medical professionals, professional associations and research organisations (see Annex 2 for list of people consulted for the assessment). Pregnant women, people with chronic diseases and health workers were identified for this assessment because they are targeted recipients of 2009 H1N1 pandemic influenza vaccine. Stakeholders were identified to help clarify groups and factors that may facilitate – or block – the targeted vaccination campaign.

Data were collected using open-ended questions. The discussion guides were translated into Kiswahili to aid discussions with pregnant women and people with chronic diseases. Data from health workers, people with chronic diseases and stakeholders were collected through individual in-depth interviews while among pregnant women, a combination of individual and small group in-depth interviews (comprising 2-3 members per group) were employed. A note-taker accompanied the interviewer to record responses. At the end of each interview, the interviewer and the note-taker compared their notes to ensure as

complete information as possible from each interview. The data analysis adopted followed the qualitative approach, focusing on recurring themes relating to the research questions. Data from the four respondent categories have been triangulated to provide a comprehensive picture of respondents' views, beliefs and values.

SECTION 2: STUDY FINDINGS

What have you heard about 2009 H1N1 pandemic influenza?

What have you heard about vaccination against 2009 H1N1 pandemic influenza?

All the pregnant women, people with chronic diseases, health care workers and stakeholders interviewed had a general awareness of 2009 H1N1 pandemic influenza, its acquisition, transmission, treatment and non-pharmaceutical prevention measures. The mass media was the main source of this information. Since the outbreak of 2009 H1N1 pandemic influenza globally and in Kenya in particular, the mass media has played a critical role in raising awareness about the disease. The descriptions of 2009 H1N1 pandemic influenza provided by the different audience groups were as follows.

Pregnant women



- It kills.
- It is infectious.
- It spreads very fast.
- It is airborne.

People with chronic diseases



- Infectious.
- Airborne.
- First occurred in Mexico.
- Easily transmissible.
- High risk mostly in places with high numbers of people.
- It can be transmitted through sharing food, clothing and sleeping together.
- Infected people need to be isolated and wear a mask in order to avoid spread.
- The disease causes runny nose.
- It can kill the same day.
- I have heard through the radio but I have never seen a person sick with Swine flu.
- It has killed some people.
- It is a very dangerous disease.
- The disease is not caused by contact with pigs.

Healthcare workers in clinics attended by pregnant women



- A viral infection more severe than seasonal flu.
- A very infectious disease that is transmitted through droplets.
- It is an infectious disease that is highly transmissible through droplets.
We should therefore cover our mouth when sneezing and should not kiss.

Health workers in chronic disease clinics



- Infectious.
- Airborne; transmitted through droplets.
- Kills fast and one can get it anytime.
- It is just like a common cold. It is not a big deal.
- Contagious.
- Signs and symptoms are almost like those of common flu.

Stakeholders



- I have heard about the disease mostly through the mass media and at airport during travel.
- It is a severe viral infection that has been around for some months now.

While all the audiences interviewed were aware of 2009 H1N1 pandemic influenza, six (6) out of ten (10) health workers and three (3) stakeholders from research organisations and government ministries out of the six interviewed knew about the existence of a vaccine against the virus. Three (3) out of the ten patients with chronic diseases said they had heard about a vaccine against H1N1 influenza. None of the pregnant women interviewed had ever heard of a vaccine against 2009 H1N1 pandemic influenza. The comments from health workers and stakeholders regarding what they had heard about 2009 H1N1 pandemic influenza were as follows.

Health workers



- I heard through the media that a vaccine has been developed and is in use in other countries.
- I have heard about 2009 H1N1 pandemic influenza but not about the vaccine.
- I have heard about arrangements to get the vaccine in Kenya but don't know how effective it will be.
- I have heard about it from the media but I did not follow the story well.

Stakeholders



- I have heard that it is in use in other countries but not its details.
- I have not heard much about the vaccine. I am just trying to read relevant literature currently.
- I have just been 'Googling' (searching on the internet) for the information on the vaccine after I was contacted for this assessment.

As a health care provider who is in contact with sick people, what do you think about your own risks of becoming sick with 2009 H1N1 pandemic influenza?



All of the 10 health workers interviewed recognised that they were at risk of H1N1 influenza infection particularly because of their contact with patients. Their explanations for their risk included the following.

- As a nurse, I am always interacting with patients who might be infected.
- We work in an out-patient facility and it is not easy to know who has the 2009 H1N1 pandemic influenza. In in-patient facilities, those already diagnosed can be isolated, hence reduce health workers' exposure through adoption of protective measures.
- I am at risk because I deal with patients on a daily basis. After the family, health workers are the second contacts with patients, hence are exposed to infection.
- We are very much at risk, especially in casualty department. We don't know who comes and what they are ailing from.
- I work in a TB clinic and most patients cough, so I am obviously exposed if any of them has the virus.
- We are constantly in contact with patients. We don't discriminate based on the symptoms a patient presents with. Even in the community, we are usually called upon to help those who are ill, including those with undiagnosed conditions. Therefore, as the first contact for patients, I am very much at risk of contracting the virus.

The health workers also identified ways in which their infection with the virus could affect them and others.

- If infected, I could infect others (colleagues and family members). Being the breadwinner, it might also have economic consequences for my family when I am unable to come to work.
- Infection with the 2009 H1N1 pandemic influenza would affect me because I would have to be isolated or quarantined. It would also potentially infect my other family members. The fear of transmitting it to others would also be distressing to me.
- If infected, it would affect my job as I would not be able to work for sometime; the need for isolation would also affect my social life.



- I will spread the disease to other members of the household through mixing with them.
- I could spread the infection to the public, for example, in public transport.
- It would affect my social life because I might have to be isolated even from my close family members and friends.

Based on everything you know now, or just your opinion about 2009 H1N1 pandemic influenza do you think you will most likely get vaccinated or will probably not get vaccinated when the vaccine becomes available?

Pregnant women



All the pregnant women expressed their willingness to receive the 2009 H1N1 pandemic influenza vaccine, but only if the vaccination was recommended by the Ministry of Public Health and Sanitation and the health care provider.

Yes, if the health worker recommends it for me, I will receive it.

Health workers' views on willingness among pregnant women to be vaccinated against H1N1 influenza virus



All the five (5) health workers in clinics attended by pregnant women agreed that pregnant women would be receptive to the vaccine, but emphasised that information on the vaccine's safety has to be provided to the women. Common explanations for this viewpoint included the following.

- Pregnant women have confidence in health workers. As long as the vaccine comes from the Ministry of Health and at the hospital, there would be no concerns. But they need adequate information on any side effects.
- Pregnant women would do anything to save their babies. They would be willing to come forward for the vaccine.

Stakeholders' views on willingness among pregnant women to be vaccinated against H1N1 influenza virus



Stakeholders were also of the common view that pregnant women would accept the vaccine, but other factors such as involvement of their male partners and information on the vaccine's safety for them and their unborn child needed to be addressed.

- Pregnant women will accept the vaccine as it would protect them from the virus and ensure healthy pregnancy.



- Acceptance of the vaccine among pregnant women can be countered by worries about the baby's safety. Concerns about safety would be heightened by rumours about the vaccine being laced with sterilisation materials like happened with the Polio vaccine.
- Pregnant women will accept the vaccine, but the role of the other party (male partner) to the pregnancy is also critical and deserves careful consideration.

People with chronic diseases



All the people with chronic diseases confirmed that they would be willing to be vaccinated against H1N1 influenza.

The people with chronic diseases, however, said their willingness to receive the vaccine would depend upon the Government's position on the vaccine and information on the vaccine's side effects.

- Prevention is better than cure, but I need information about side effects first (Female HIV patient).
- If it is recommended for people with diabetes, I have no problem (Male diabetes patient).
- If it is recommended by the Government, I will accept it (Female Diabetes patient).
- The government cannot introduce a dangerous thing to the public. They know it is good for people (Male diabetes patient).

Health workers' views on willingness among people with chronic diseases to be vaccinated against H1N1 influenza virus



All the five (5) health workers in chronic disease clinics as well as the stakeholder did not perceive any potential problems with vaccination of people with chronic diseases. However, they noted that correct and clear information has to be provided, especially on the vaccine's safety, effectiveness and any possible interactions with existing medication used by the patients. Other issues for consideration include cost and accessibility.

- There would be no problems in providing the vaccine to persons with HIV. If they get the vaccine, they will not catch the influenza easily.
- Distance of the place to get vaccinated could present a problem.
- High cost could also present problems for vaccination of people with chronic illness because many of them are also poor.
- Understanding of the benefits of vaccination to themselves is critical for the uptake of the vaccine among those with chronic diseases.
- Convincing for vaccination may not be easy, especially among older patients. This is particularly common with diabetes patients who are usually reluctant to accept even new drugs.

Health workers' willingness to be vaccinated against H1N1 influenza virus



Even though all of the 10 health workers recognised their risk for 2009 H1N1 pandemic influenza, **three** of them (2 from a clinic attended by pregnant women and one (1) working in a chronic disease clinic) expressed that they would be unwilling to be vaccinated against the virus. But even among those willing to be vaccinated, they had caveats.

- Yes, I would be willing to be vaccinated but I have to understand the side-effects of the vaccine first.
- Yes, I would receive the vaccine, but only if there are no major side effects. Otherwise, we would rather get H1N1 influenza then develop natural immunity.

The views of the health workers who were reluctant to be vaccinated were as follows.

Healthcare workers in clinics attended by pregnant women



- I am rather hesitant to be vaccinated. But I would accept vaccination if there was an outbreak in the area our health facility serves.
- Some people have survived the H1N1 infection without vaccine.
- There has been no H1N1-related case fatality reported in the country. So why vaccinate health workers?

A health worker in a chronic disease clinic



- For flu generally, I don't see the need for vaccination. This is also because viruses usually mutate rapidly and a vaccine may not remain protective long enough to warrant vaccination of health workers.

The view that health workers might be resistant to H1N1 pandemic influenza vaccination also came out of stakeholder interviews as highlighted below.

- We don't get shots for regular flu, so why this one? There has been no death reported that can be linked to the H1N1 influenza in the country. Whose interests are being addressed in this particular vaccination campaign - is it the patients' or the drug manufacturers'?
- Healthcare workers have to perceive the risks in order to accept the vaccine. Appropriate communication strategies must be applied to stimulate interest in the vaccine among health workers. Hepatitis vaccination has always been there but uptake cannot be judged as optimal. However, for HIV post-exposure prophylaxis for which the health workers clearly perceive their risks, an innate motivation exists for uptake.



- The vaccination should have been promoted in the initial phase (outbreak) of the pandemic. The fear of the disease is not as prominent now and with it might have come a devaluation of personal risk. This may influence uptake of vaccination among health workers.

Consistent with the views of one of the stakeholders that the vaccine should have been promoted during the initial outbreak, reduced mass media reporting on H1N1 influenza cases had also created a belief among targeted vaccine recipients that the disease had disappeared. One person with a chronic disease asked:

- I have had the feeling that Swine flu ended. So is it still there?

The notion that there was no longer an outbreak of 2009 H1N1 pandemic influenza in Kenya was, however, dispelled by the Ministry of Public Health and Sanitation officials during a stakeholders' meeting for communication materials development held in Nairobi on November 12th, 2009. The Ministry officials reported that there had been a consistent increase in influenza cases with isolated 2009 H1N1 pandemic influenza infection accounting for up to 40% of all influenza-related cases seen in 26 sentinel surveillance centres across the country since June 2009. The information on the incidence and prevalence of 2009 H1N1 pandemic influenza and the proportion of infected persons who were health workers was, however, not widely disseminated leading to perceptions of diminished risk to the disease, especially among health workers.

What would be the benefits of using this new vaccine?

Pregnant women



Pregnant women identified the following benefits of vaccination.

- It will protect since our immunity is low.
- It will protect me and the unborn baby from infection.

People with chronic diseases



- I will be protected from infection. Neighbours and family will also be protected from infection, but they too need to be vaccinated (Male TB patient).
- I will be protected and therefore would not be infected. My child pays for my medication. She won't have to pay when I am protected through vaccination (Female HIV patient).

Health workers



The benefits of vaccination identified by health workers were as follows.

- I will have immunity against the flu.
- The vaccine protects people from getting the flu. Prevention is always better than cure.
- The vaccine can protect me from the virus hence protect other members of my family as I would not transfer the infection to them.
- I would develop immunity hence would not get the disease even when I come into contact with someone with the virus.
- I will develop immunity against H1N1 influenza. But it would be better if the vaccine could protect against other influenza too.
- I will be protected. In case the infection comes, it won't be severe.

What concerns do you have about H1N1 vaccine?

Pregnant women



- We need information about how it is used.
- We need information about its side effects.
- Is it safe for the baby?

Among people with chronic diseases, the recurrent concern about H1N1 influenza vaccination was its side effects.

- If there are no adverse side effects, I have no concerns (HIV patient)

The following were identified by health workers as potential concerns among people with chronic diseases regarding vaccination against H1N1 influenza.

- Side effects.
- Failure of the vaccine.
- Fears that the vaccination might make them sicker.
- Worries about the vaccine interfering with other treatments.

Health workers

- What are its side effects?
- What are the benefits? What do we stand to gain from using or what would be the consequence of not receiving it?
- The vaccine may not work. It may fail.



- I may get reactions; side effects.
- Swelling on the injection site is also a concern for me.
- What happens when one is exposed to the virus after vaccination? How does the body react?
- Does the vaccine interact with other medication that one might be using?

Are there people who think that you should be vaccinated against 2009 H1N1 pandemic influenza?

Pregnant women



- Husband
- Family members

People with chronic diseases



Family members and neighbours were identified by nine (9) out of the 10 people with chronic diseases as people who would approve or support their vaccination. However, the respondents explained that the support of their family members and neighbours would be contingent upon the information provided to them.

- It all depends on how the information is provided to parents, children and other family members. They may be worried about the effect of the vaccine on my health.
- Family members understand the problem caused by illness and would therefore support my vaccination to prevent infection.

Health workers



- The employer - to ensure health, safety and productivity of their staff.
- Ministry of Public Health and Sanitation - to reduce disease burden.
- The family - to ensure my good health and continued contribution to their socio-economic needs.
- The community - to ensure availability of healthcare workers to provide treatment for other conditions affecting community members.

It is only the health workers in chronic disease clinics who identified the patients they serve as among people who would approve or support their vaccination against H1N1 influenza. This probably reflects the long-term care relationship they have developed with their patients and the mutual desire for continuity of care.

Are there other people you know - in your family, or others - who might have concerns about you getting vaccinated against 2009 H1N1 pandemic influenza?

Pregnant women

- Four out of the 14 women interviewed identified specifically their husband and other family members as people who could potentially have concerns about their vaccination against 2009 H1N1 pandemic influenza while the rest said they did not anticipate any external opposition to their vaccination. The common reason for family members' concerns was lack of information on the vaccine's safety.

For the pregnant women who foresaw no obstacles to their vaccination, the common explanations were as follows.

- Vaccination and health is a personal decision. As long as I get information from health professionals who are more reliable, I would not listen to what others say.
- As long as I explain to my husband that the vaccine has been recommended by my doctor, he would have no problem.
- I just have to inform my husband that I am receiving treatment or vaccination at the hospital and that is it.

The above findings among women suggest that male resistance may not pose serious obstacles to pregnant women's vaccination as had been suggested by some stakeholders, notably from professional associations and research organisations. However, providing information to men and ensuring their involvement is critical to the success of a vaccination campaign for pregnant women.

People with chronic diseases

- Six (6) out of 10 people with chronic diseases did not perceive any possible opposition to their vaccination. Two of the people with chronic diseases perceived potential opposition from their family members while the other two were not sure. Regarding potential opposition to their vaccination against H1N1 influenza, the main reasons provided were as follows.

- Family members may think the vaccine is being tested on me. There have been many studies in people living with HIV and some people might think this is another one. Family may also worry about adverse effects of the vaccine (Female HIV patient).
- Husband prefers herbal medicine and has been questioning why I come to the hospital for a long-term health condition. I think he would even be more resistant to vaccination if he were to hear about it (Female diabetes patient).

Health workers



Half of the 10 health workers interviewed said their family members might have concerns about their vaccination against 2009 H1N1 pandemic influenza while the rest saw no obstacles to their vaccination. Family concerns were expected to centre on vaccine safety.

- Family members would be worried about what will happen if something goes wrong as a result of the vaccine i.e. potential side effects.
- Children and husband – they would be concerned because I care for them. If I die as a result of anything associated with the vaccination, who will care for them?
- My husband is not a medic and does not believe in these new things (vaccination), so he would be resistant to my vaccination.

A common theme among the health workers who saw no obstacle to their vaccination reflected their role as health workers.

- As a health worker, the members of the family would have confidence in my decision to receive the vaccine and would equally support the same.
- I am a health worker. I understand better what I need and I don't need permission from anywhere.

What would make it easier for you to be vaccinated?

Pregnant women



- Vaccine should be made available in the nearest health centre
- Vaccine should be in regular supply
- Vaccine should be given free of charge
- If vaccine is provided through a door-to-door campaign.
- If it is made compulsory – part of essential vaccines during pregnancy.
- It is affordable.
- Information on the availability of the vaccine
- Education on how the vaccine works
- If offered at a cost, information on how much it costs.

People with chronic diseases



Responses from people with chronic diseases were as follows.

- If the vaccine is approved by the Ministry of Health.
- If I am among the targeted group for vaccination, it will be easier for me because it must have been found by the government to be good for me.



- Easy accessibility.
- If the vaccine is provided at this Comprehensive Care Centre where I am already receiving treatment.
- If the vaccine is provided at Government hospitals and recognised private health facilities.
- If there is minimal transport costs required to receive the vaccine.
- If provided at the health facility where I attend diabetes clinic monthly.
- If the vaccine is provided at the nearest health facility.
- If the vaccine is free of charge.
- If the vaccine is recommended by a doctor.
- If announcements about the vaccine are made within the communities where we live.

Health workers



- Adequate information on researches that have been conducted on the vaccine.
- If I am provided with full information on the origin of the 2009 H1N1 pandemic influenza, how the vaccine works, its advantages and disadvantages.
- I should be knowledgeable about the disease, the vaccine (its side effects, how it works and where to get it).
- Adequate evidence that lack of vaccination would heighten risks to the disease.
- Public health sector availability of the vaccine as quality cannot be assured from some private sector providers.
- If the employer provides the vaccine.
- If provided at the workplace.
- Vaccine availability.

Regular availability of the vaccine was particularly of concern to one health worker, based upon unsatisfactory experiences with previous vaccination campaigns targeted at health workers.

- From the experience with hepatitis B vaccination where most health workers got only the first injection through Government funding, and then asked to pay for subsequent shots, we would want to be guaranteed that the vaccine will be available regularly in order to accept it.

What would make it more difficult for you to be vaccinated?

Pregnant women



- When it is offered at a fee (cost).
- If the vaccine is not easily available.

People with chronic diseases



- Lack of information on the vaccine.
- Cost (payment to receive the vaccine)
- Side effects.
- If the vaccine is provided at a fee.
- If the vaccine is expensive.
- Some people fear. I fear to be among the first to be vaccinated. I need to see others use it first. I need to see how safe it is for others first. Is it being tested on us?
- If there are adverse reactions with current medication.

However, two of the people with chronic diseases explained that nothing would make it difficult for them to receive the vaccine as they were even willing to pay for it.

- Nothing would make it difficult for me to receive the vaccine. I am even willing to pay for it. I am already paying for my diabetes treatment.
- None; I am even willing to pay for it.

Health workers



- Adverse side-effects from the vaccination.
- High cost.
- Duration of protection offered by the vaccine.
- Lack of knowledge concerning the vaccine.
- Irregularity of supply if re-injections are necessary.
- Concerns about proper storage of the vaccine and retention of its effectiveness.

When you come for vaccination with H1N1 flu vaccine, what information would you like the health care provider to give you about this vaccine during the vaccination?

Pregnant women's views



- Medical risks posed by 2009 H1N1 pandemic influenza both to the mother and the unborn child.
- How to deal with the disease in case of infection.
- What is the number of times one needs to come for the vaccine?
- Information on side-effects.
- Guidance and counselling on how to use the vaccine.
- “Does one need to stay with others or should one be isolated after the vaccination?”
- “Is it safe to share food with others who are infected even after the vaccination?”

Health workers' and stakeholders' views on information pregnant women would require about the vaccine

Health care workers and stakeholders thought that pregnant women would require the following information when they come for vaccination.



- Benefits of vaccination to themselves and the baby
- How the H1N1 influenza virus is acquired and transmitted
- Safety of the vaccine to both the mother and the baby.
- Vaccine availability and accessibility.
- Reassurance that the vaccine has no side effects for the unborn baby.
- Information on whether a baby could become infected if the mother is infected with 2009 H1N1 pandemic influenza? “A pregnant woman may ask: Can I transmit the disease to the unborn child?”

Views of people with chronic diseases

The information identified by those with chronic diseases themselves as necessary during their time of vaccination were as follows.



- More information about the H1N1 influenza and how it would affect me given I am on medication for TB.
- Detailed information about vaccination and other prevention measures.
- Side effects and benefits.
- How to prevent the disease first of all, without vaccination.
- Whether the vaccine will interact with my ongoing treatment.
- Any contraindication with other medicines.
- Counselling: why the vaccination? What are its benefits? You just can't come to be injected without knowing what the injection is all about. I should also be free to accept it or refuse it and be allowed time to think about it. I need to also know if it has any effects on the ARVs that I am presently using.
- I take medication daily, how will the vaccine affect my other medication?
- How to prevent infection with the virus.
- Side effects, particularly related to my diabetic condition.
- I am diabetic. I don't know if it will be safe for me. Is it right to be vaccinated when I have diabetes?
- Dangers of H1N1 influenza given my health status (HIV patient).

Health workers' and stakeholders' views on information people with chronic diseases would require about the vaccine



- What is H1N1 influenza? What causes it?
- What is the benefit of vaccination?



- What is the number of doses or injections involved? Because of the demand for long-term medication with ARVs, people with HIV would want to be assured that the vaccine does not add pill or injection burden.
- Does vaccination destabilise the body's immunity against other illnesses?
- Information that they are very vulnerable (especially those with diabetes) and that any destabilization of the immune system through infection with other diseases will greatly affect their health. Therefore, vaccination is good for their immunity and overall health.
- An assurance that there is no contraindication with the other drugs they are using.

Are there other people besides the health care provider from whom you would like to hear about the H1N1 vaccine?

Pregnant women's views



Thirteen out of 14 women interviewed identified the following as other important sources from which they would like to hear about the 2009 H1N1 pandemic influenza vaccine.

- Religious leaders.
- Community health workers.
- Husband and other family members.

However, one woman was of the view that information about the vaccine should be provided by health workers only.

- Information on the vaccine should be provided only at the health centre because other people in the wider community might provide misleading information.

Views of people with chronic diseases



- Public health educators.
- Patients who have already received the vaccine so they can share their experiences.
- Community health workers.
- Public education even in churches and by the local administration.
- Religious leaders.

Like the dissenting pregnant woman, one respondent with a chronic disease was of the view that information about the vaccine should only come from the health facility to avoid the spread of rumours and misconceptions.

- Information about the vaccine should be provided at the hospital only. There are conmen who may want to cash in on patients.

Stakeholders' views



In addition to the groups identified by pregnant women and people with chronic diseases, stakeholders mentioned the following as important audiences from which information on the vaccine should be provided.

- Civil society.
- Senior officials at the Ministry of Health such as the Minister or other high-ranking officials.
- Faith-based organisations.
- Professional and other associations such as Kenya Medical Association, Diabetic Association, National Network of People Living with HIV.
- Senior medical doctors who have received the vaccine themselves.
- Pregnant women and people with chronic diseases who have been vaccinated to talk about their experiences.

How could health care providers, such as doctors and nurses, respond to the concerns that pregnant women and their families might raise? What are the best ways to prepare health care providers to be able to respond to the concerns of pregnant women and their families?

Health workers' views



All the health workers said they would be able to address any concerns pregnant women or people with chronic diseases have about vaccination after receiving training on the vaccine.

- If I am trained, I will explain and teach pregnant women about the vaccine and its safety. Clients need to be educated about the vaccine, but this requires that health workers be equipped with the necessary information first, to relay the same to patients.
- I should be trained first so as to know more about the vaccine and provide similar information to the clients or patients.
- I would use the knowledge I acquire from training to address pregnant women's concerns.

Asked how they would respond to concerns about H1N1 influenza vaccination among pregnant women and people with chronic diseases, the health workers provided the following explanations.



- I would tell the patients about the vaccine and its side effects but not to focus much on the disadvantages of vaccination.
- I would explain the benefits of the vaccine and if the patient is not sure whether to receive it or not, give them time to think about it.
- I would encourage informed choice. I would not force them.
- I would provide clear information about the vaccine to the patients and allow them to make informed choice regarding whether to be vaccinated or not.

Stakeholders' views



The stakeholders suggested the following interventions to prepare health workers to respond to concerns raised by pregnant women and people with chronic diseases about the vaccine.

- Easy-to-read information on the virus and vaccine.
- A targeted information campaign to reach all healthcare workers with specific emphasis on their risks for the disease and benefits of vaccination.
- Training through continued medical education (CME) approach.
- Development of job aids addressing safety and risk issues.
- Development of appropriate information education and communication (IEC) materials.
- Health workers' values and views regarding the vaccine and its effectiveness should be addressed appropriately.

Suggested contents of training for health workers to provide 2009 H1N1 pandemic influenza vaccine



Health workers identified the following topics as important for their training to provide the vaccine.

- Origins of the 2009 H1N1 pandemic influenza and its dangers.
- Current disease surveillance mechanisms in the country.
- Clinical trials on 2009 H1N1 pandemic influenza vaccine and findings on safety and effectiveness;
- Information on where else the vaccine is presently being used.
- The lifespan of 2009 H1N1 pandemic influenza virus and development of natural immunity against it.
- Risk-groups and risk-factors for 2009 H1N1 pandemic influenza.
- Vaccine dosage.
- Side-effects of the vaccine, including contra-indications.
- Appropriate handling and storage of the vaccine.
- Interval of vaccination (duration of immunity provided).
- Information on availability of the vaccine.
- Vaccination site and procedure.



- How to provide the vaccine: is it an injection only?
- How to handle and store the vaccine.
- Number of doses.
- Properties of the vaccine.
- How the vaccine works.
- Possible complications especially for those on other long-term medications.
- Any contraindications for normal medication.

ANNEX I: LIST OF PEOPLE CONSULTED FOR THE ASSESSMENT

Stakeholders



1. Dr. Robert Ayisi HSC – Medical Officer of Health, Nairobi City Council
2. Dr. Bartilol Kigen – Division of Family Health (formerly Division of Reproductive Health), Ministry of Public Health and Sanitation
Shiphrah Kuria – Programme Officer - Division of Family Health, Ministry of Public Health and Sanitation
3. Dr. Njoroge Waithaka – Secretary General, Kenya Obstetricians and Gynaecologists Society (KOGS).
4. Mr. Jonathan K. Kertich – Public Health Officer, National (Disaster) Operations Centre, Office of the President
5. Dr. Marsden Solomon – Regional Medical Advisor, Family Health International
6. Dr. Joshua Kimani – Clinical Director, Kenya AIDS Control Project, University of Nairobi/University of Manitoba

Health workers



Kariobangi health centre (nurses)

1. Nancy Karanja
2. Margaret Kiberenge
3. Lucy Gitau

Langata health centre (nurses)

1. Jocelyn Kwamboka
2. Keziah Ochieng'

Mbagathi District Hospital

1. Anne Achola – Enrolled Nurse – HIV Counsellor
2. Wilmina Abungu – Nurse – TB Clinic,
3. Anne – general casualty

Mathari Hospital

1. Betina Muthama – BSN – Diabetes Clinic
2. Anne Wanjiku – Nutritionist – Diabetes Clinic

Pregnant women



Kariobangi health centre

Nine (9) women in second to third trimester of pregnancy.

Langata health centre

Five (5) women in second to third trimester of pregnancy.

People with chronic health conditions

Mbagathi District Hospital

TB patients – 2

Persons living with HIV – 3

Mathari Hospital

Diabetes patients - 5

ANNEX II: DISCUSSION GUIDES

Discussion guide for pregnant women



1. Have you received other vaccinations before when you have been pregnant? What did you like about the experience? What didn't you like? (**Probe: amount of time for waiting, or the information that the health worker gave during the vaccination session**)
2. Can you tell us what you have heard about H1N1 flu? What have you heard about vaccination against H1N1 flu?
3. **Based on everything you know now, or just your opinion about H1N1 flu, do you think you will most likely get vaccinated or will probably not get vaccinated when the vaccine becomes available? (If not sure, get them to choose "yes" or "no", even if they are not sure by asking which way they are leaning – yes or no.)**
4. What do you think about the MOH's proposal to vaccinate pregnant women with this vaccine when it becomes available?
5. Could you please explain your opinion?
6. What would be the benefits of using this new vaccine? The benefits for you? The benefits for your baby and for your family? (Probe: protection of mother against H1N1 flu means she won't be sick with H1N1 when she is pregnant or when her baby is born...)
7. Now I would like to ask you if you have any concerns about this new vaccine. Are there any reasons why you would not be vaccinated with this H1N1 flu vaccine? What do you see as the disadvantages, if any, of being vaccinated?
8. If that is the case, what are the reasons? (**Probe: acceptability by the woman, her husband, mother-in-law or others; difficulty in getting to the health facility when pregnant**)
9. Are there people who think that you should be vaccinated against H1N1 flu? Who are they?



10. Are there other people you know - in your family, or others - who might have concerns about you getting vaccinated against H1N1 flu? Who are they? What concerns do you think they would have? What about concerns in other people's families?
11. What would make it EASIER for you to be vaccinated?
12. What would make it more difficult for you to be vaccinated?
13. When you come for vaccination with H1N1 flu vaccine, what information would you like the health care provider [*use locally-appropriate term*] to give you about this vaccine during the vaccination?
14. If you have concerns, what would you like to hear from the health care provider that could reassure you? (*Probe: what you need to do in case of side effects; reassurance that the vaccine is safe; which illnesses the vaccine can prevent; how many times to get the vaccine.*)
15. Are there other people besides the health care provider from whom you would like to hear about this vaccine?
16. Do you know when and where vaccinations will be given in this area?

Discussion guide for persons with chronic illnesses



1. Can you tell us what you have heard about H1N1 flu (or Homa ya Nguruwe)? What have you heard about vaccination against H1N1 flu (or Homa ya Nguruwe)?
2. Based on everything you know now, or just your opinion about H1N1 flu (or Homa ya Nguruwe), do you think you will most likely get vaccinated or will probably not get vaccinated when the vaccine becomes available? (***If not sure, get them to choose “yes” or “no”, even if they are not sure by asking which way they are leaning – yes or no.***)
3. What do you think about the MOH’s proposal to vaccinate people with chronic illnesses with this vaccine?
4. Could you please explain your opinion?
5. What would be the benefits of using this new vaccine? The benefits for you? The benefits for your family?
6. Now I would like to ask you if you have any concerns about this new vaccine. Are there any reasons why you would not be vaccinated with this H1N1 flu (or Homa ya Nguruwe) vaccine? What do you see as the disadvantages, if any, of being vaccinated?
7. If that is the case, what are the reasons?
8. Are there people who think that you should be vaccinated against H1N1 flu (or Homa ya Nguruwe)? Who are they?
9. Are there other people you know - in your family, or others - who might have concerns about you getting vaccinated against H1N1 flu (or Homa ya Nguruwe)? Who are they? What concerns do you think they would have? What about concerns in other people’s families?
10. What would make it EASIER for you to be vaccinated?
11. What would make it more difficult for you to be vaccinated?
12. When you come for vaccination with H1N1 flu (or Homa ya Nguruwe) vaccine, what information would you like the health care provider [***use locally-appropriate term***] to give you about this vaccine during the vaccination?
13. If you have concerns, what would you like to hear from the health care provider that could reassure you? (***Probe: what you need to do in case of side effects; reassurance that the vaccine is safe; which illnesses the vaccine can prevent; how many times to get the vaccine.***)



14. Are there other people besides the health care provider from whom you would like to hear about this vaccine?

Discussion guide for health workers (vaccinators)



1. Can you tell us what you have heard about H1N1 flu disease?
2. As a health care provider who is in contact with sick people, what do you think about your own risks of becoming sick with H1N1 flu? (**Probe: in what ways would H1N1 flu . affect you? If you got sick with it, how would it affect your family?**)
3. What have you heard about vaccination against H1N1 flu?
4. Based on everything you know now, or just your opinion about H1N1 flu, do you think you will most likely get vaccinated or will probably not get vaccinated when the vaccine becomes available? (**If not sure, get them to choose “yes” or “no”, even if they are not sure by asking which way they are leaning – yes or no.**)
5. What advantages do you see to your getting vaccinated against H1N1 flu?
6. What disadvantages or concerns do you see with getting vaccinated against H1N1 flu?
7. Are there people you know that would approve of your being vaccinated against H1N1 flu? Who would want you to get vaccinated? Who are they?
8. Are there other people you know - in your family, or others - who might have concerns or disapprove of your getting vaccinated against H1N1 flu? Who are they? If this is the case, what concerns do you think they would have?
9. What would make it EASIER for you to be vaccinated?
10. What would make it more DIFFICULT for you to be vaccinated?
11. Do you think that there could be any problem in administering this vaccine to pregnant women (or people with chronic diseases) in the manner that I just described? If yes, what are they? Assume that it will be given through a special campaign, not routine ANC or immunization services. (**Probe: women may be reluctant to get vaccinated; added workload; giving information to woman, other...**)
12. What information do you think pregnant women (or people with chronic diseases) and their families would need about H1N1 flu vaccination so that they would be willing to participate in the H1N1 flu campaign?
13. Do you think pregnant women (or people with chronic diseases) or their families might have any reasons for not accepting this new vaccine? If so, in your opinion, what would these concerns be?



14. As a health care provider, how could you respond to these concerns? (**Probe: Would you give them the vaccine anyway? Reassure them that the vaccine is safe? Let them leave without getting vaccinated?**)

15. What type of information would you like to receive during training that would help you to respond to the concerns that patients or clients could have?

Interview guide for stakeholders



1. Could you please tell us what you have heard about H1N1 influenza, both around the world and in this region? What risks do you think it poses to people in this country?
2. What have you heard about the H1N1 influenza vaccine? (*Probe on efficacy and safety, availability.*)
3. What do you think will be the benefits of this vaccine, given how the MOH plans to use it in conducting a campaign to immunize health workers and pregnant women in the country?
4. Do you have any concerns about this vaccination campaign for health workers and pregnant women? If so, what are they?
5. For health care providers – doctors, nurses, and others—do you think they will accept to receive this vaccine? What reasons, if any, do you think they would have for not getting vaccinated with it?
6. For pregnant women, do you think they will accept to receive H1N1 influenza vaccine? What reasons, if any, do you think they or their families would have for not getting vaccinated with it?
7. What types of information do you think pregnant women and their families would need about H1N1 influenza vaccination so that they would be willing to participate in the campaign?
 - From whom should they hear this information--who or what are the most trusted and convincing sources of information for them about vaccination?
8. How could health care providers, such as doctors and nurses, respond to the concerns that pregnant women and their families might raise?
9. What are the best ways to prepare health care providers to be able to respond to the concerns of pregnant women and their families? (Probe: Training? Supervision? Brief technical materials? Seminars or newsletters from professional associations?)
[*Note: for interviews with community or religious leaders, the probes may be different.*]
10. Do you have any other comments or points that you would like to make? If not, thank you for your time and attention.

