

mHealth and Obstetrics

07.10.2014

The Use of Cell Phone for Maternal Health: The Abiye Project

OYEYEMI Femi

MD, MSc (telemedicine & eHealth), MPH

WYNN Rolf (supervisor)

Presentation:
Based on my Master Project

**'The Use of Cell Phone for Maternal Health:
The Abiye Project'**

submitted to the
Department Telemedicine and eHealth,
University of Tromsø

What makes this Important?

Maternal Deaths/Mortality

In 2010: 287,000 died due to pregnant-related causes (1).

[In 2013: 289,000 died!].

> 95 % in Sub-Saharan Africa and South Asia

An African woman's lifetime risk of dying from pregnancy-related causes is **100 times** higher than that of a woman in Norway

UN Millennium Development Goals

Goal 5: Improve maternal health

Target 5A:

Reduce by 75% the maternal mortality ratio by 2015

What is causing the deaths?

9 - 15 % of all pregnancies will develop complications that can potentially lead to death

Risk of developing these complications is similar worldwide

But the risk of death is not!

Why?

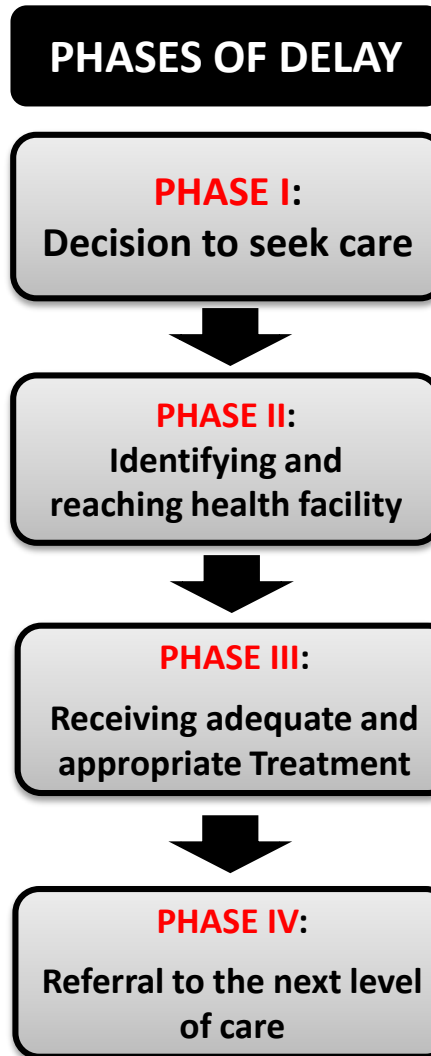
Why?

Delays! Delays!! Delays!!! (2)

40 - 70 % deaths are due to delays

Delay: due to heterogenic reasons,
financial, cultural, literacy, social, geographical
and so on...

Phases of Delay (3)

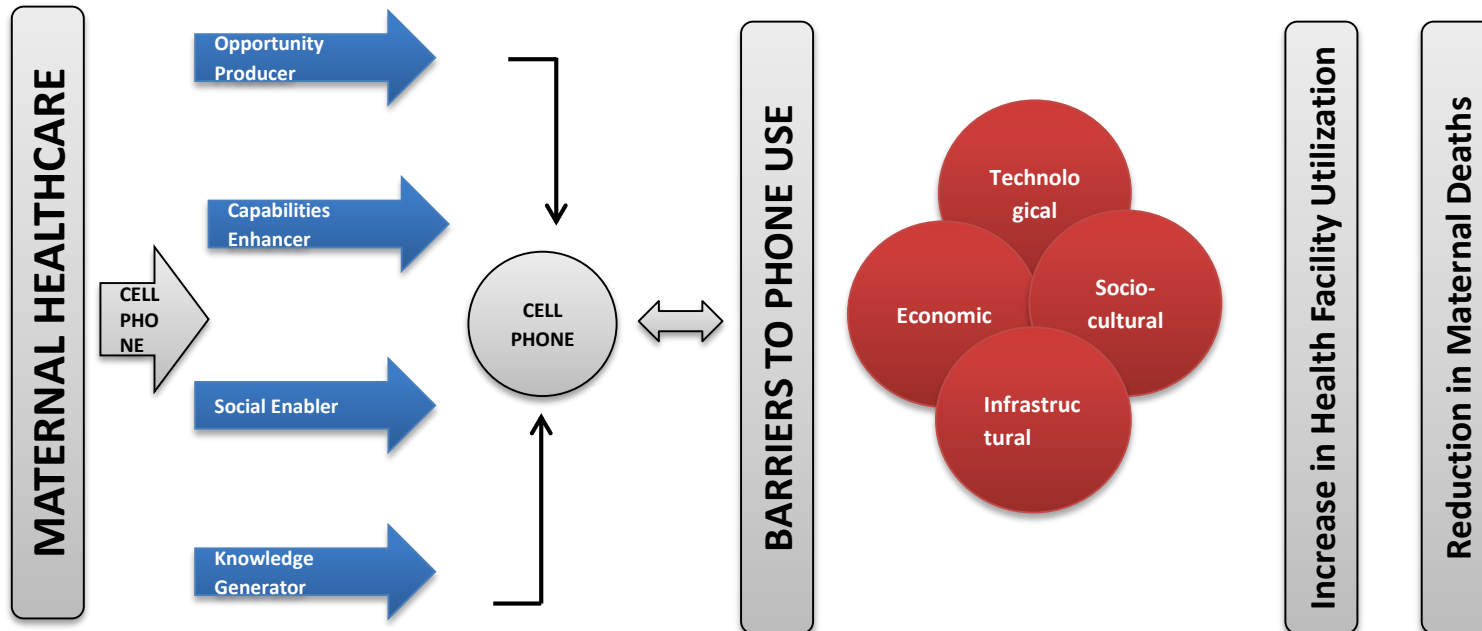


Can Cell Phones *really* Help?

Cell phones (and smartphones) are increasingly common in West Africa (4)

Cell-phones-for-maternal-health model ⁽³⁾

(An adaptation of the ICTs for Education/Health)



The Abiye Project ⁽¹⁾

A pilot project in Ifedore Local Government Area

Initiated by the Ondo-State Government ,
Nigeria

“Abiye” means ‘safe motherhood’

Pregnant women are given toll-free cell phones

to call their health facility; their nurse;
or fellow pregnant women, free

(free phone! free calls!)

Map of Africa showing Nigeria







STATE NHIS-MDG/MCH INITIATIVE

BASIC HEALTH CENTRE ESE-OKE

**NHIS-MDS/MCH FREE HEALTH CARE FOR
PREGNANT WOMEN AND CHILDREN UNDER FIVE**

**IDANRE LOCAL GOVERNMENT,
ONDO STATE**

With about 52,000 pregnant women dying yearly, maternal mortality remains one of Nigeria's biggest health challenges. TOYOSI OGUNSEYE, who spent three days in rural communities in Ondo State, reports on a government initiative that is using mobile phones to save the lives of indigent pregnant women

Apart from a small maize farm in Ife-Ota, Ondo State, 29-year-old Idia Adeniga has only one prized possession: a cheap mobile phone.

For many, a mobile phone is not for business or pleasure. For Adeniga, it is an object of trending fascination and a life saver.

"I go everywhere with it. I don't allow my children to touch it. I don't want them to spoil it," she says with excitement.

"I got it about two years ago, when she went to the Basic Health Centre, House of Abuse, Idigbo, Igbo-Ota, in her native Ondo, pregnant with her second child. What she went for was antenatal care, what the govt, in addition to the case was a mobile phone. She was told to use it to regularly update a health worker assigned to monitor her pregnancy."

Chucking like a child, she remembers it. "That was my first time of having a phone. The nurse gave it to me and said I could call her any time I want. I was feeling well, I could call her. Even if it was a little headache, I would pick my phone up to talk to her because she's in my house, even if I have a little phone, and when I became pregnant with my first child, my name was always calling me to be used, you know."

Abije, a Yoruba word meaning 'Safe deliveries', was the name that the Ondo State Government gave to an initiative meant to reduce pregnant women from ancient maternal deaths and complications. The Abije phone is small, cheap, slim black one which performs the basic functions of a phone. The government decided that instead Local Government, which Adeniga lives, should be the location of the phone house.

Despite its glimmering capital city and other commercial centres like Lagos and Port Harcourt, Nigeria, as centres others have shown, is a nation of rural dwellers.

A World Bank report published in 2008 says:

"I didn't know how to use the phone. I didn't know how to operate a phone."

Like Adeniga and many other women, she was always doing with their children. But in almost two years, I personally monitored 60 women who use Abije 80 healthy babies and 80 mothers who are able to take care of their children. That makes me happy every day.

Books steering indigent pregnant women to the government clinics, two phone to also bring health workers to the back maternal clinics in the state.

Observations: "Word were found that we were giving out phones and they were in droves. We were able to track almost all the pregnant women in the government area. I have one of the phones but it is not here. One of them come in and get the phone. I don't know them."

that 51.6 per cent of Nigerians live in rural areas where most times are very poor and sometimes, the Abije phone is converted to a commercial phone by the breakdown of the family and used to generate some income.

Ranger Falakunjo says, "When some of the pregnant women get home with the phones, their husbands will collect them and start using as theirs. It defeats the purpose they are meant for because even when you call, the husbands won't be at home to give the phones to their wives so that you can speak to them."

There is also the challenge of poor connectivity. One of the pregnant women told our correspondent under the condition of anonymity that it is sometimes difficult connecting with her range. "I will try her number so many times, but I won't be able to reach her because of network problem. But if I am persistent, it will connect."

Dr. Leand Oyinloye, the Chief Medical Officer and Child Health Specialist, says he is also on the Abije committee, says solutions have been found to these challenges.

He states, "The issue of connectivity is a technical one that the network provider is working on. We have been in meetings with them on that."

"Talking about improper use of the phone, we will be going into SIM cards in the next phase of the project, which we have called Abije Plus. Because the issue is how many women will use keep buying phones for use."

However, for pregnant women that can't afford phones, we will give it to them, but the SIM cards will be built into the phones so that the phone can only work with the Abije SIM card. "Then we will ensure that at least every community has one Abije phone which we will give to the women leader and she can reach us on it if there is any problem."

To improve our maternal mortality data, a bill of confidential enquiry into maternal mortality has been passed by the House of Assembly, and it stipulates that every woman that dies in pregnancy or that is associated with pregnancy must be laid to rest properly in the government. Failure to attract punitive measures. We want to know what is happening outside the facilities. All case gives must report maternal deaths so we can know the degree of the problem in the state."

SUNDAY PUNCH's findings showed that there were two traditional maternal homes in Idigbo LG. One is operated by the wife of a traditional ruler in Igbo-Ota, Idigbo, Igbo-Ota, while the other is located at Oke-Ikoko. When our correspondent visited both centres, the members of staff advised our enquiries posed by SUNDAY PUNCH because their 'doctors' were not around. The wife of the traditional ruler was said to have travelled out of the country, while the 'pregnant' who resides the second centre had reportedly travelled to Abokuta, Ogun State.

In 2008, the World Health Organisation listed Ondo State as the state with the worst maternal index in South-West Zone than 20 per cent of pregnant women, it said, was going to give birth in health facilities.

This made the organization visit the state and agreed to sponsor the Abije project. Three years later, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

Most of these are out of from modern medical facilities, making many pregnant women vulnerable to easily preventable sicknesses.

The state Commissioner for Health, Dr. David Adekunle, describes Abije as a "home-grown initiative meant to bridge the gap between rural pregnant women and modern medical facilities."

"We needed a home-grown initiative that would reverse this ugly trend (maternal mortality), and that was how Abije came to being," he says.

What Adekunle meant by 'highly need' is Nigeria's high mortality rate. According to Contraceptive Abije Intelligence, more than 600,000 women die due to childbirth or pregnancy-related complications around the world annually. Nigeria is responsible for about 10 per cent of that figure.

Across the country, however, this rate differs. Different studies have put the estimated average maternal mortality rate at 1,000 to every 100,000 births. But maternal mortality is much higher in the North-Western region of Nigeria, accounting for 75 per cent of the country's maternal deaths, compared to the South-East and South-West regions.

Larkie Akintoye, 20, a tailor and mother of two, is one of those who had had to use to a private hospital through a connection section and didn't enjoy the experience.

"I didn't like the operation; it was God that saved my life. Also, it was too expensive, it took all my life savings. So when I became pregnant last year, my husband told me that I had to go to a government hospital because we didn't have money to afford a private hospital again," she says.

When she got to the health centre, her name gave her the Abije phone.

"I didn't know how to use the phone. I didn't know how to operate a phone."

What she went for was antenatal care, what the govt, in addition to the case was a mobile phone. She was told to use it to regularly update a health worker assigned to monitor her pregnancy.

Chucking like a child, she remembers it. "That was my first time of having a phone. The nurse gave it to me and said I could call her any time I want. I was feeling well, I could call her. Even if it was a little headache, I would pick my phone up to talk to her because she's in my house, even if I have a little phone, and when I became pregnant with my first child, my name was always calling me to be used, you know."

Abije, a Yoruba word meaning 'Safe deliveries', was the name that the Ondo State Government gave to an initiative meant to reduce pregnant women from ancient maternal deaths and complications. The Abije phone is small, cheap, slim black one which performs the basic functions of a phone. The government decided that instead Local Government, which Adeniga lives, should be the location of the phone house.

Despite its glimmering capital city and other commercial centres like Lagos and Port Harcourt, Nigeria, as centres others have shown, is a nation of rural dwellers.

A World Bank report published in 2008 says:

"I didn't know how to use the phone. I didn't know how to operate a phone."

Like Adeniga and many other women, she was always doing with their children. But in almost two years, I personally monitored 60 women who use Abije 80 healthy babies and 80 mothers who are able to take care of their children. That makes me happy every day.

Books steering indigent pregnant women to the government clinics, two phone to also bring health workers to the back maternal clinics in the state.

Observations: "Word were found that we were giving out phones and they were in droves. We were able to track almost all the pregnant women in the government area. I have one of the phones but it is not here. One of them come in and get the phone. I don't know them."

In 2008, the World Health Organisation listed Ondo State as the state with the worst maternal index in South-West Zone than 20 per cent of pregnant women, it said, was going to give birth in health facilities.

This made the organization visit the state and agreed to sponsor the Abije project. Three years later, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

What she went for was antenatal care, what the govt, in addition to the case was a mobile phone. She was told to use it to regularly update a health worker assigned to monitor her pregnancy.

Chucking like a child, she remembers it. "That was my first time of having a phone. The nurse gave it to me and said I could call her any time I want. I was feeling well, I could call her. Even if it was a little headache, I would pick my phone up to talk to her because she's in my house, even if I have a little phone, and when I became pregnant with my first child, my name was always calling me to be used, you know."

Abije, a Yoruba word meaning 'Safe deliveries', was the name that the Ondo State Government gave to an initiative meant to reduce pregnant women from ancient maternal deaths and complications. The Abije phone is small, cheap, slim black one which performs the basic functions of a phone. The government decided that instead Local Government, which Adeniga lives, should be the location of the phone house.

Despite its glimmering capital city and other commercial centres like Lagos and Port Harcourt, Nigeria, as centres others have shown, is a nation of rural dwellers.

A World Bank report published in 2008 says:

"I didn't know how to use the phone. I didn't know how to operate a phone."

Abije: Saving indigent pregnant women's lives with phones

In 18 months, we have delivered at least 200 babies and I am telling you that we did not lose any child or mother. Before the advent of the Abije phones, we had less than 30 women coming to this centre in two years to be delivered'

with calls. The first strategy is to be friends with them. I take interest in their jobs and families, we will bring and visit them often."

Ranger Olesinde and the women in her state group are like an extended family. "We are family now. We are sisters. They all come to my house and I go to theirs. The phone has made us very close. All through their pregnancies, they

called me every day to tell me how they were feeling and in cases of emergencies, we went to their homes on a motorcycle with a First Aid box. If it is something we can't handle at the centre, we take them to the general hospital."

Another ranger, Mrs. Fika Falakunjo who works at the Comprehensive Health Centre, Ilesa-Mokin, has 25 patients in her cluster group.

"For twelve women gave birth in my care so far, less than two years and that is tremendous, considering what used to happen before," she says with pride. "You know, this is a rural area and almost all of them patronized herbalists who knew nothing about maternal care. The mothers did not rest in a proper home, the children would die. It was that bad. Unfortunately, we didn't have the statistics of maternal or infant mortality in this area before the Abije scheme."

"But look at this; you see how four rangers in this centre and each of us has monitored a minimum of 50 pregnant women in 18 months. So, in 18 months, we have delivered at least 200 babies and I am telling you that we did not lose any child or mother. Before the advent of the Abije phones, we had less than 30 women coming to this centre in two years to be delivered. Look at the percentage difference."

"It is almost impossible for a mother or child to die, because I see each of them since a week; I know their medical histories. I am always discussing with them on the phone if I am not at their homes. I know when they sneeze or cough. You know, calling the group is easy, so they call me at any slight discomfort. If anything is beyond me, I tell the doctor to attend

to them. If it is beyond us, we take them to a bigger hospital. But that is not because of daily monitoring."

The Primary Health Coordinator, Idigbo Local Government Area, Ms. Onosika Martins Ade, says as at April 2010, 1,200 Abije phones had been given to pregnant women and another 700 phones have been given out this year.

"I can tell you confidently that we can track all the 1,900 women," he says.

Even though there are no comprehensive data in the state, statistics from the Ministry of Health show that the total number of pregnant women that registered in all the health centres before April 2010 is between LG is 240. Out of the 46, only 77 of them came back to be delivered of their babies.

However, since the inception of Abije, 4,900 women have gone for antenatal registration in the LG, and about 1,500 deliveries have been recorded, with one maternal death.

Also, the records show that 18 traditional births were recorded in the LG in 18 months. This number was exceeded when the mothers brought their children for immunisation in the clinics.

Adeniga, the health commissioner, explains that the baseline survey that was available before Abije commenced showed that only 16 per cent of those who registered in the health centres in the state came back to deliver their babies.

"I'd down on us that we needed to track these pregnant women and help them return to the health facilities," he says.

According to him, delay in seeking, reaching, receiving and referring health care are the major reasons for maternal mortality in Nigeria.

He says, "Delay in seeking care is the reason we have to track them and put them on a 'call-me' service group that is prepared by government. When we did that, we were able to track the pregnant women. The 1,200 initial members had 20 health rangers attached to them. The rangers would then see one pregnant woman per day. Because they are on toll-free lines and the health rangers are in touch with them every minute, the delay in seeking care is minimised to almost zero."

This also takes care of delay in seeking health centres, because we station four-wheel ambulances in every of the pregnant women when they call in the wards. One per ward, so at every point in time, they can reach health care."

In terms of delay in referral from the basic health care, when necessary, they are referred to the comprehensive health care centres and then the general hospital. That way, we have saved lives, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

Even though there are no comprehensive data in the state, statistics from the Ministry of Health show that the total number of pregnant women that registered in all the health centres before April 2010 is between LG is 240. Out of the 46, only 77 of them came back to be delivered of their babies.

However, since the inception of Abije, 4,900 women have gone for antenatal registration in the LG, and about 1,500 deliveries have been recorded, with one maternal death.

Also, the records show that 18 traditional births were recorded in the LG in 18 months. This number was exceeded when the mothers brought their children for immunisation in the clinics.

Adeniga, the health commissioner, explains that the baseline survey that was available before Abije commenced showed that only 16 per cent of those who registered in the health centres in the state came back to deliver their babies.

"I'd down on us that we needed to track these pregnant women and help them return to the health facilities," he says.

According to him, delay in seeking, reaching, receiving and referring health care are the major reasons for maternal mortality in Nigeria.

He says, "Delay in seeking care is the reason we have to track them and put them on a 'call-me' service group that is prepared by government. When we did that, we were able to track the pregnant women. The 1,200 initial members had 20 health rangers attached to them. The rangers would then see one pregnant woman per day. Because they are on toll-free lines and the health rangers are in touch with them every minute, the delay in seeking care is minimised to almost zero."

This also takes care of delay in seeking health centres, because we station four-wheel ambulances in every of the pregnant women when they call in the wards. One per ward, so at every point in time, they can reach health care."

In terms of delay in referral from the basic health care, when necessary, they are referred to the comprehensive health care centres and then the general hospital. That way, we have saved lives, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

"A cross-section of pregnant women who use the Abije phone during an antenatal visit at the Comprehensive Health Centre, Ilesa-Mokin

to them. If it is beyond us, we take them to a bigger hospital. But that is not because of daily monitoring."

The Primary Health Coordinator, Idigbo Local Government Area, Ms. Onosika Martins Ade, says as at April 2010, 1,200 Abije phones had been given to pregnant women and another 700 phones have been given out this year.

"I can tell you confidently that we can track all the 1,900 women," he says.

Even though there are no comprehensive data in the state, statistics from the Ministry of Health show that the total number of pregnant women that registered in all the health centres before April 2010 is between LG is 240. Out of the 46, only 77 of them came back to be delivered of their babies.

However, since the inception of Abije, 4,900 women have gone for antenatal registration in the LG, and about 1,500 deliveries have been recorded, with one maternal death.

Also, the records show that 18 traditional births were recorded in the LG in 18 months. This number was exceeded when the mothers brought their children for immunisation in the clinics.

Adeniga, the health commissioner, explains that the baseline survey that was available before Abije commenced showed that only 16 per cent of those who registered in the health centres in the state came back to deliver their babies.

"I'd down on us that we needed to track these pregnant women and help them return to the health facilities," he says.

According to him, delay in seeking, reaching, receiving and referring health care are the major reasons for maternal mortality in Nigeria.

He says, "Delay in seeking care is the reason we have to track them and put them on a 'call-me' service group that is prepared by government. When we did that, we were able to track the pregnant women. The 1,200 initial members had 20 health rangers attached to them. The rangers would then see one pregnant woman per day. Because they are on toll-free lines and the health rangers are in touch with them every minute, the delay in seeking care is minimised to almost zero."

This also takes care of delay in seeking health centres, because we station four-wheel ambulances in every of the pregnant women when they call in the wards. One per ward, so at every point in time, they can reach health care."

In terms of delay in referral from the basic health care, when necessary, they are referred to the comprehensive health care centres and then the general hospital. That way, we have saved lives, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

Even though there are no comprehensive data in the state, statistics from the Ministry of Health show that the total number of pregnant women that registered in all the health centres before April 2010 is between LG is 240. Out of the 46, only 77 of them came back to be delivered of their babies.

However, since the inception of Abije, 4,900 women have gone for antenatal registration in the LG, and about 1,500 deliveries have been recorded, with one maternal death.

Also, the records show that 18 traditional births were recorded in the LG in 18 months. This number was exceeded when the mothers brought their children for immunisation in the clinics.

Adeniga, the health commissioner, explains that the baseline survey that was available before Abije commenced showed that only 16 per cent of those who registered in the health centres in the state came back to deliver their babies.

"I'd down on us that we needed to track these pregnant women and help them return to the health facilities," he says.

According to him, delay in seeking, reaching, receiving and referring health care are the major reasons for maternal mortality in Nigeria.

He says, "Delay in seeking care is the reason we have to track them and put them on a 'call-me' service group that is prepared by government. When we did that, we were able to track the pregnant women. The 1,200 initial members had 20 health rangers attached to them. The rangers would then see one pregnant woman per day. Because they are on toll-free lines and the health rangers are in touch with them every minute, the delay in seeking care is minimised to almost zero."

This also takes care of delay in seeking health centres, because we station four-wheel ambulances in every of the pregnant women when they call in the wards. One per ward, so at every point in time, they can reach health care."

In terms of delay in referral from the basic health care, when necessary, they are referred to the comprehensive health care centres and then the general hospital. That way, we have saved lives, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

Even though there are no comprehensive data in the state, statistics from the Ministry of Health show that the total number of pregnant women that registered in all the health centres before April 2010 is between LG is 240. Out of the 46, only 77 of them came back to be delivered of their babies.

However, since the inception of Abije, 4,900 women have gone for antenatal registration in the LG, and about 1,500 deliveries have been recorded, with one maternal death.

Also, the records show that 18 traditional births were recorded in the LG in 18 months. This number was exceeded when the mothers brought their children for immunisation in the clinics.

Adeniga, the health commissioner, explains that the baseline survey that was available before Abije commenced showed that only 16 per cent of those who registered in the health centres in the state came back to deliver their babies.

"I'd down on us that we needed to track these pregnant women and help them return to the health facilities," he says.

According to him, delay in seeking, reaching, receiving and referring health care are the major reasons for maternal mortality in Nigeria.

He says, "Delay in seeking care is the reason we have to track them and put them on a 'call-me' service group that is prepared by government. When we did that, we were able to track the pregnant women. The 1,200 initial members had 20 health rangers attached to them. The rangers would then see one pregnant woman per day. Because they are on toll-free lines and the health rangers are in touch with them every minute, the delay in seeking care is minimised to almost zero."

This also takes care of delay in seeking health centres, because we station four-wheel ambulances in every of the pregnant women when they call in the wards. One per ward, so at every point in time, they can reach health care."

In terms of delay in referral from the basic health care, when necessary, they are referred to the comprehensive health care centres and then the general hospital. That way, we have saved lives, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

Even though there are no comprehensive data in the state, statistics from the Ministry of Health show that the total number of pregnant women that registered in all the health centres before April 2010 is between LG is 240. Out of the 46, only 77 of them came back to be delivered of their babies.

However, since the inception of Abije, 4,900 women have gone for antenatal registration in the LG, and about 1,500 deliveries have been recorded, with one maternal death.

Also, the records show that 18 traditional births were recorded in the LG in 18 months. This number was exceeded when the mothers brought their children for immunisation in the clinics.

Adeniga, the health commissioner, explains that the baseline survey that was available before Abije commenced showed that only 16 per cent of those who registered in the health centres in the state came back to deliver their babies.

"I'd down on us that we needed to track these pregnant women and help them return to the health facilities," he says.

According to him, delay in seeking, reaching, receiving and referring health care are the major reasons for maternal mortality in Nigeria.

He says, "Delay in seeking care is the reason we have to track them and put them on a 'call-me' service group that is prepared by government. When we did that, we were able to track the pregnant women. The 1,200 initial members had 20 health rangers attached to them. The rangers would then see one pregnant woman per day. Because they are on toll-free lines and the health rangers are in touch with them every minute, the delay in seeking care is minimised to almost zero."

This also takes care of delay in seeking health centres, because we station four-wheel ambulances in every of the pregnant women when they call in the wards. One per ward, so at every point in time, they can reach health care."

In terms of delay in referral from the basic health care, when necessary, they are referred to the comprehensive health care centres and then the general hospital. That way, we have saved lives, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

Even though there are no comprehensive data in the state, statistics from the Ministry of Health show that the total number of pregnant women that registered in all the health centres before April 2010 is between LG is 240. Out of the 46, only 77 of them came back to be delivered of their babies.

However, since the inception of Abije, 4,900 women have gone for antenatal registration in the LG, and about 1,500 deliveries have been recorded, with one maternal death.

Also, the records show that 18 traditional births were recorded in the LG in 18 months. This number was exceeded when the mothers brought their children for immunisation in the clinics.

Adeniga, the health commissioner, explains that the baseline survey that was available before Abije commenced showed that only 16 per cent of those who registered in the health centres in the state came back to deliver their babies.

"I'd down on us that we needed to track these pregnant women and help them return to the health facilities," he says.

According to him, delay in seeking, reaching, receiving and referring health care are the major reasons for maternal mortality in Nigeria.

He says, "Delay in seeking care is the reason we have to track them and put them on a 'call-me' service group that is prepared by government. When we did that, we were able to track the pregnant women. The 1,200 initial members had 20 health rangers attached to them. The rangers would then see one pregnant woman per day. Because they are on toll-free lines and the health rangers are in touch with them every minute, the delay in seeking care is minimised to almost zero."

This also takes care of delay in seeking health centres, because we station four-wheel ambulances in every of the pregnant women when they call in the wards. One per ward, so at every point in time, they can reach health care."

In terms of delay in referral from the basic health care, when necessary, they are referred to the comprehensive health care centres and then the general hospital. That way, we have saved lives, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

Even though there are no comprehensive data in the state, statistics from the Ministry of Health show that the total number of pregnant women that registered in all the health centres before April 2010 is between LG is 240. Out of the 46, only 77 of them came back to be delivered of their babies.

However, since the inception of Abije, 4,900 women have gone for antenatal registration in the LG, and about 1,500 deliveries have been recorded, with one maternal death.

Also, the records show that 18 traditional births were recorded in the LG in 18 months. This number was exceeded when the mothers brought their children for immunisation in the clinics.

Adeniga, the health commissioner, explains that the baseline survey that was available before Abije commenced showed that only 16 per cent of those who registered in the health centres in the state came back to deliver their babies.

"I'd down on us that we needed to track these pregnant women and help them return to the health facilities," he says.

According to him, delay in seeking, reaching, receiving and referring health care are the major reasons for maternal mortality in Nigeria.

He says, "Delay in seeking care is the reason we have to track them and put them on a 'call-me' service group that is prepared by government. When we did that, we were able to track the pregnant women. The 1,200 initial members had 20 health rangers attached to them. The rangers would then see one pregnant woman per day. Because they are on toll-free lines and the health rangers are in touch with them every minute, the delay in seeking care is minimised to almost zero."

This also takes care of delay in seeking health centres, because we station four-wheel ambulances in every of the pregnant women when they call in the wards. One per ward, so at every point in time, they can reach health care."

In terms of delay in referral from the basic health care, when necessary, they are referred to the comprehensive health care centres and then the general hospital. That way, we have saved lives, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

Even though there are no comprehensive data in the state, statistics from the Ministry of Health show that the total number of pregnant women that registered in all the health centres before April 2010 is between LG is 240. Out of the 46, only 77 of them came back to be delivered of their babies.

However, since the inception of Abije, 4,900 women have gone for antenatal registration in the LG, and about 1,500 deliveries have been recorded, with one maternal death.

Also, the records show that 18 traditional births were recorded in the LG in 18 months. This number was exceeded when the mothers brought their children for immunisation in the clinics.

Adeniga, the health commissioner, explains that the baseline survey that was available before Abije commenced showed that only 16 per cent of those who registered in the health centres in the state came back to deliver their babies.

"I'd down on us that we needed to track these pregnant women and help them return to the health facilities," he says.

According to him, delay in seeking, reaching, receiving and referring health care are the major reasons for maternal mortality in Nigeria.

He says, "Delay in seeking care is the reason we have to track them and put them on a 'call-me' service group that is prepared by government. When we did that, we were able to track the pregnant women. The 1,200 initial members had 20 health rangers attached to them. The rangers would then see one pregnant woman per day. Because they are on toll-free lines and the health rangers are in touch with them every minute, the delay in seeking care is minimised to almost zero."

This also takes care of delay in seeking health centres, because we station four-wheel ambulances in every of the pregnant women when they call in the wards. One per ward, so at every point in time, they can reach health care."

In terms of delay in referral from the basic health care, when necessary, they are referred to the comprehensive health care centres and then the general hospital. That way, we have saved lives, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

Even though there are no comprehensive data in the state, statistics from the Ministry of Health show that the total number of pregnant women that registered in all the health centres before April 2010 is between LG is 240. Out of the 46, only 77 of them came back to be delivered of their babies.

However, since the inception of Abije, 4,900 women have gone for antenatal registration in the LG, and about 1,500 deliveries have been recorded, with one maternal death.

Also, the records show that 18 traditional births were recorded in the LG in 18 months. This number was exceeded when the mothers brought their children for immunisation in the clinics.

Adeniga, the health commissioner, explains that the baseline survey that was available before Abije commenced showed that only 16 per cent of those who registered in the health centres in the state came back to deliver their babies.

"I'd down on us that we needed to track these pregnant women and help them return to the health facilities," he says.

According to him, delay in seeking, reaching, receiving and referring health care are the major reasons for maternal mortality in Nigeria.

He says, "Delay in seeking care is the reason we have to track them and put them on a 'call-me' service group that is prepared by government. When we did that, we were able to track the pregnant women. The 1,200 initial members had 20 health rangers attached to them. The rangers would then see one pregnant woman per day. Because they are on toll-free lines and the health rangers are in touch with them every minute, the delay in seeking care is minimised to almost zero."

This also takes care of delay in seeking health centres, because we station four-wheel ambulances in every of the pregnant women when they call in the wards. One per ward, so at every point in time, they can reach health care."

In terms of delay in referral from the basic health care, when necessary, they are referred to the comprehensive health care centres and then the general hospital. That way, we have saved lives, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

Even though there are no comprehensive data in the state, statistics from the Ministry of Health show that the total number of pregnant women that registered in all the health centres before April 2010 is between LG is 240. Out of the 46, only 77 of them came back to be delivered of their babies.

However, since the inception of Abije, 4,900 women have gone for antenatal registration in the LG, and about 1,500 deliveries have been recorded, with one maternal death.

Also, the records show that 18 traditional births were recorded in the LG in 18 months. This number was exceeded when the mothers brought their children for immunisation in the clinics.

Adeniga, the health commissioner, explains that the baseline survey that was available before Abije commenced showed that only 16 per cent of those who registered in the health centres in the state came back to deliver their babies.

"I'd down on us that we needed to track these pregnant women and help them return to the health facilities," he says.

According to him, delay in seeking, reaching, receiving and referring health care are the major reasons for maternal mortality in Nigeria.

He says, "Delay in seeking care is the reason we have to track them and put them on a 'call-me' service group that is prepared by government. When we did that, we were able to track the pregnant women. The 1,200 initial members had 20 health rangers attached to them. The rangers would then see one pregnant woman per day. Because they are on toll-free lines and the health rangers are in touch with them every minute, the delay in seeking care is minimised to almost zero."

This also takes care of delay in seeking health centres, because we station four-wheel ambulances in every of the pregnant women when they call in the wards. One per ward, so at every point in time, they can reach health care."

In terms of delay in referral from the basic health care, when necessary, they are referred to the comprehensive health care centres and then the general hospital. That way, we have saved lives, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

The scheme is being practised in rural areas where most times are very poor and sometimes, the Abije phone is converted to a commercial phone by the breakdown of the family and used to generate some income.

Ranger Falakunjo says, "When some of the pregnant women get home with the phones, their husbands will collect them and start using as theirs. It defeats the purpose they are meant for because even when you call, the husbands won't be at home to give the phones to their wives so that you can speak to them."

There is also the challenge of poor connectivity. One of the pregnant women told our correspondent under the condition of anonymity that it is sometimes difficult connecting with her range. "I will try her number so many times, but I won't be able to reach her because of network problem. But if I am persistent, it will connect."

Dr. Leand Oyinloye, the Chief Medical Officer and Child Health Specialist, says he is also on the Abije committee, says solutions have been found to these challenges.

He states, "The issue of connectivity is a technical one that the network provider is working on. We have been in meetings with them on that."

"Talking about improper use of the phone, we will be going into SIM cards in the next phase of the project, which we have called Abije Plus. Because the issue is how many women will use keep buying phones for use."

However, for pregnant women that can't afford phones, we will give it to them, but the SIM cards will be built into the phones so that the phone can only work with the Abije SIM card. "Then we will ensure that at least every community has one Abije phone which we will give to the women leader and she can reach us on it if there is any problem."

To improve our maternal mortality data, a bill of confidential enquiry into maternal mortality has been passed by the House of Assembly, and it stipulates that every woman that dies in pregnancy or that is associated with pregnancy must be laid to rest properly in the government. Failure to attract punitive measures. We want to know what is happening outside the facilities. All case gives must report maternal deaths so we can know the degree of the problem in the state."

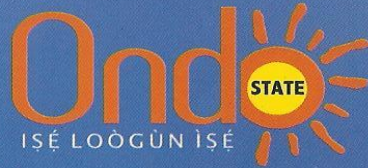
SUNDAY PUNCH's findings showed that there were two traditional maternal homes in Idigbo LG. One is operated by the wife of a traditional ruler in Igbo-Ota, Idigbo, Igbo-Ota, while the other is located at Oke-Ikoko. When our correspondent visited both centres, the members of staff advised our enquiries posed by SUNDAY PUNCH because their 'doctors' were not around. The wife of the traditional ruler was said to have travelled out of the country, while the 'pregnant' who resides the second centre had reportedly travelled to Abokuta, Ogun State.

In 2008, the World Health Organisation listed Ondo State as the state with the worst maternal index in South-West Zone than 20 per cent of pregnant women, it said, was going to give birth in health facilities.

This made the organization visit the state and agreed to sponsor the Abije project. Three years later, the global body has released new statistics, but with the help of Abije, and a new WHO grant to help the state, the phone initiative in 17 local governments, Ondo State's reputation as a maternal mortality is set to change.

What she went for was antenatal care, what the govt, in addition to the case was a mobile phone. She was told to use it to regularly update a health worker assigned to monitor her pregnancy.

Chucking like a child, she remembers it. "That was my first time of having a phone. The nurse gave it to me and said I could call her any time I want. I was feeling well, I could call her. Even if it was a little headache, I would pick my phone up to talk to her because she's in my house, even if I have a little phone, and when I became pregnant with my first child, my name was always calling me to be used, you know



ONDO STATE GOVERNMENT OF NIGERIA

aBiye

SAFE MOTHERHOOD PROGRAMME...



- that pregnancy may no longer be
a death sentence

The Master Project:

To investigate the effect of cell phone on:

- Facility utilization

ratio of delivery to ANC registration

- Causes of maternal deaths

75 percent of maternal deaths:

- (1) severe haemorrhage (bleeding)
- (2) maternal sepsis (infections)
- (3) obstructed labour
- (4) Eclampsia;
- (5) and unsafe abortion

Research Hypotheses

- 1). Cell phone use increases *primary healthcare* utilization of pregnant women
- 2). Cell phone use reduces the *odds of occurrence* of causes of maternal deaths

Methodology

Case-control study design

Data from hospital registers and patient casefiles
(from January 1 – December 31, 2011)

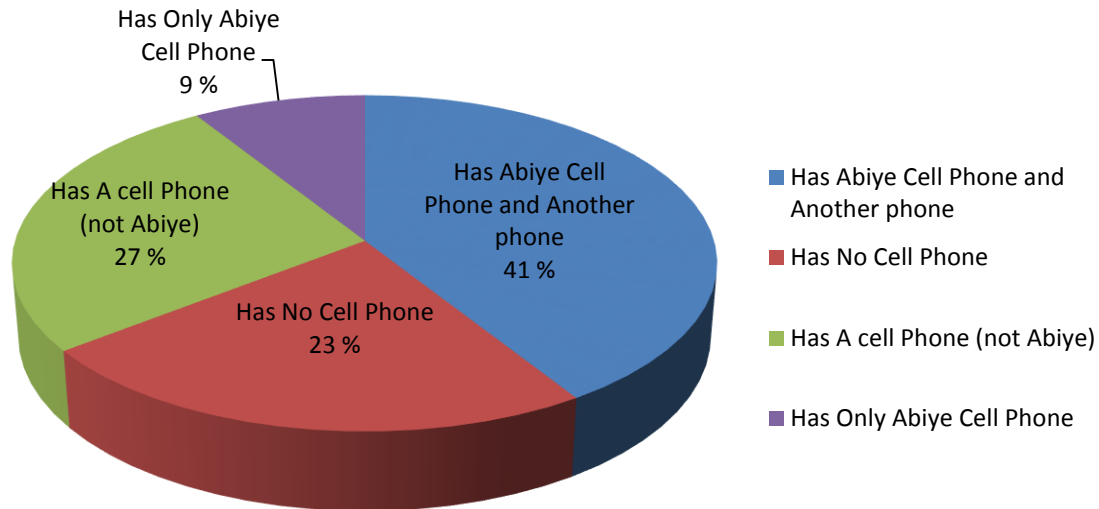
Questionnaires

for supplementary data

Findings

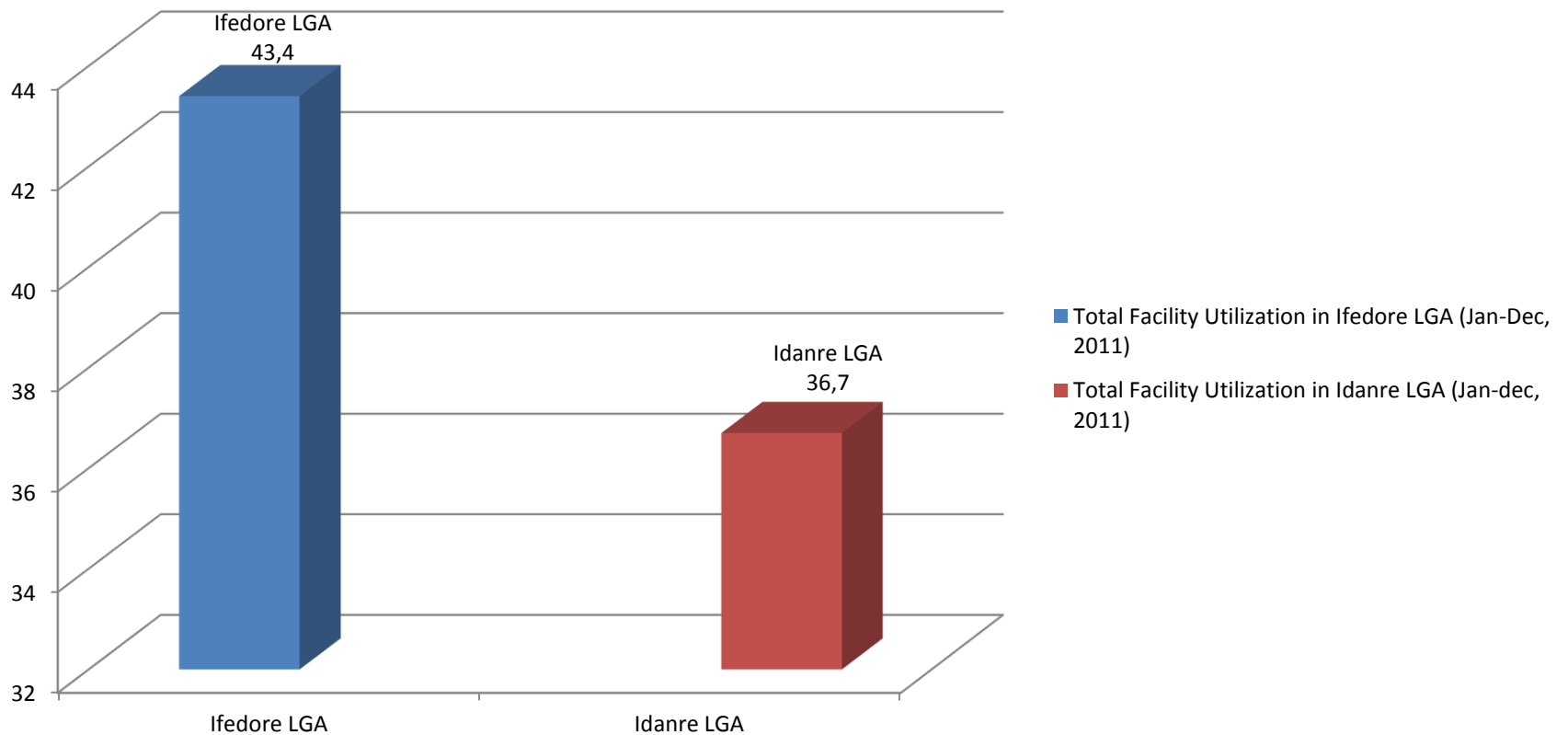
ABIYE CELL PHONE ADOPTION IN IFEDORE LGA

ABIYE CELL PHONE ADOPTION IN IFEDORE LGA

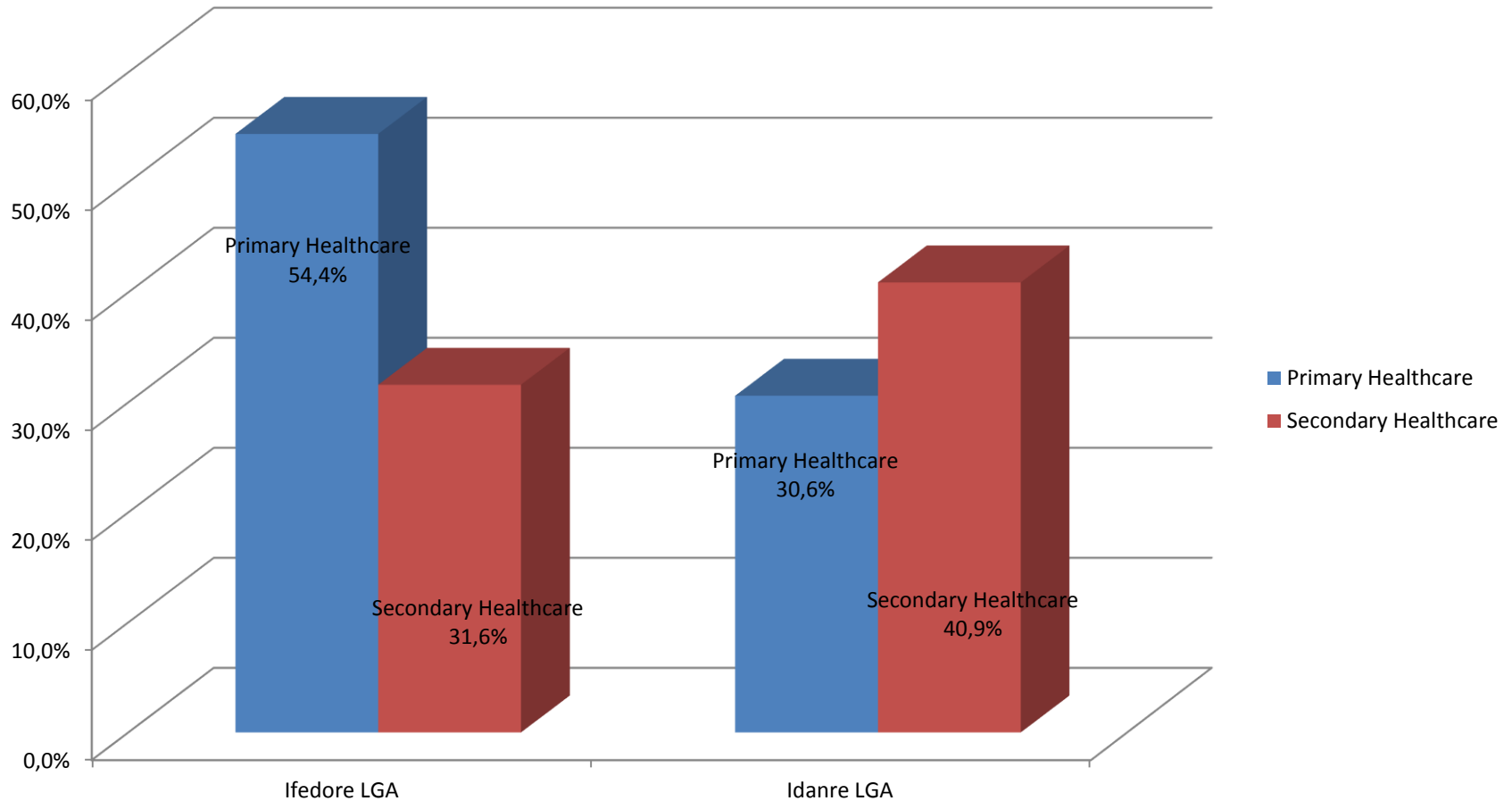


Facility Utilization

Ifedore Vs Idanre LGA ($p= 0.0001$)



Facility Utilization of the *Primary and Secondary Healthcare* in the 2 LGAs



Distribution of Cases and Non-cases by Exposure Status to Abiye Cell Phone Program

Exposure to Abiye Cell Phone Program	Cases	Non-Cases (Controls)	Total
YES (Ifedore LGA)	23	1406	1429
NO (Idanre LGA)	29	1772	1801
Total	62	3178	3230

Cases:

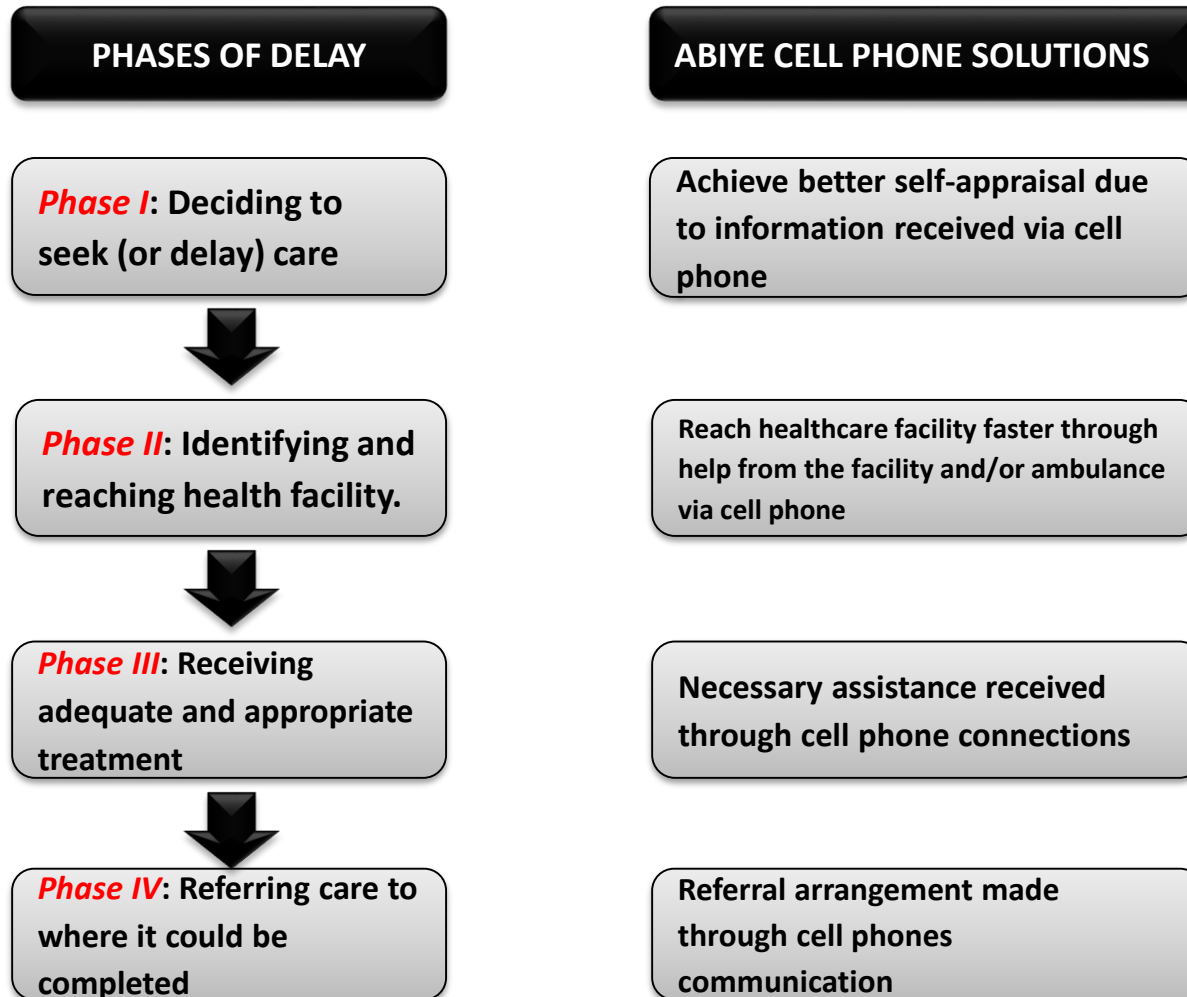
severe haemorrhage (bleeding); maternal sepsis (infections); obstructed labour; Eclampsia; and unsafe abortion

Odds ratio = 1

The odds of the major causes of maternal deaths in either of the 2 LGAs was statistically same (3).

Conclusions

Phases of Delay and Abiye Cell Phone (1,3)



The first hypothesis was confirmed

that cell phone increases *primary healthcare* facility utilization of pregnant women.

The second hypothesis was not

that cell phone use reduces the *odds of occurrence* of causes of maternal deaths,

or requires re-assessment at a later date.

References

1. Oyeyemi SO, Wynn R. Giving cell phones to pregnant women and improving services may increase primary health facility utilization: a case-control study of a Nigerian project. *Reprod Health*. 2014;11(1):8. PMID: 24438150.
2. Oyeyemi SF, Wynn R. Pregnant Women in Developing Countries Who Receive Free Cell Phones may Get Help Faster: A Literature Study. *Stud Health Technol Inform*. 2014;205:1204. PMID: 25160396.
3. Oyeyemi SO. The Use of Cell Phone for Maternal Health: The Abiye Project. Unpublished master thesis. University of Tromsø; 2014.
4. Ebola, Twitter, and Misinformation: A dangerous combination? *BMJ*. 2014;349 (Rapid response published 7 October 2014). Accessed at <http://www.bmj.com/content/349/bmj.g5975/rr/776571>

**Thank you
for your attention!**