



Analyzing CCPF calls from pregnant women about COVID-19

Report on Method 1a



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Acronyms

- CCPF** Chipatala cha pa Foni, or “Health Center by Phone”
- HLW** Hotline worker (nurses staffing the call)
- MOH** Ministry of Health in Malawi

Background

In response to the global Covid-19 pandemic, the aims of the study were expanded to explore the intersection of Covid-19 and maternal health. This enabled the study to contribute timely, relevant findings to help inform decision-making about maternal health service delivery in the context of Covid-19 in Malawi.

This report summarizes results of:

Qualitative analysis (Method 1a) of 15 calls from women who had called CCPF seeking Covid-19 information while pregnant between June 2020 and October 2020.

During the June 1 to October 31 time period from which calls were sampled, Malawi had reported 5,930 confirmed cases of Covid-19. As of January 28, Malawi has now reported 21,660 cumulative confirmed cases since April 2, 2020 (Max Roser, 2020). With a growing surge of cases, it is critically important to explore the questions and concerns that Malawians, including pregnant women, are having in regards to Covid-19, how it spreads, and how to protect themselves and their families.

OBJECTIVES

Method 1a was added to the study methods as a means of gathering of additional health center hotline data related to the intersection of COVID-19 and maternal health. This method was designed to contribute timely, relevant findings to help inform decision-making about maternal health service delivery in the context of COVID-19 in Malawi.

This report summarizes results of Method 1a, in which we qualitatively analyzed 15 calls from pregnant women who called CCPF with questions about COVID-19.

Method 1a: Qualitative analysis of COVID-19 calls from pregnant women

Methodology

SAMPLE SELECTION

In order to select the 10–20 intended number of relevant calls, we first downloaded all call data from the Viamo server from June 2020 (when the system first integrated “Covid” as a call intent) through October 2020. We then sorted by “caller intent (or purpose of

call)” for anything related to Covid-19 and then sorted by “pregnancy status” to identify calls from pregnant women. This sampling method does not guarantee that a woman who called about Covid-19 discussed her pregnancy in relation to Covid-19 with the HLW. An absence of these concerns, however, would also be illuminating and so we proceeded with this criteria in place to find calls where a woman called with Covid-19 questions or symptoms, and was also pregnant.

Using this criteria, we identified 18 calls likely to be about both Covid-19 and maternal health questions, concerns, and care-seeking potentially impacted by Covid-19. The VillageReach IT officer then retrieved the audio recordings from the CCPF call platform Viamo system.

The VillageReach hotline supervisor listened to the calls and completed a quantitative coding sheet (see appendix) for each call, capturing whether the call was about Covid-19, pregnancy, or both, and whether the client had questions, fears, myths, etc. The coding process was implemented in order to select which calls to prioritize for full qualitative analysis. Three of the 18 calls had choppy audio that made it difficult to understand and so the remaining set of 15 calls were transcribed and translated for analysis.

ANALYSIS

We used Atlas.ti to conduct qualitative analysis on the set of 15 calls. We used the codebook from Method 1 as a basis for initial coding, and performed open coding on new themes arising around Covid-19 questions, misinformation, and advice.

Findings

OVERVIEW

Ten of the calls covered both Covid-19 and pregnancy—the remaining five calls were also from pregnant women, but there was only brief mention of her pregnancy status and the call focused on Covid-19.

Almost all of the calls were for information only, yet two callers reported potential Covid-19 symptoms in addition to requesting information. All callers were calling for themselves (rather than someone calling on their behalf).

Calls lasted from a minimum of 4 minutes in duration to a maximum of just over 36 minutes, with an average call

duration of 10 minutes and 30 seconds, and 67% of calls lasting between 6 minutes and 13 minutes.

DEMOGRAPHIC CHARACTERISTICS OF CCPF CLIENTS

Per the selection criteria and process, all fifteen calls were with pregnant women who had questions about Covid (with one including a male who then passed the phone to his pregnant friend after his questions had been addressed). Every call but one featured clients who were new to the CCPF service, with one caller remarking,

"I have just found this number recently for this mobile clinic."

–Caller 14

Two of the callers were health workers, with one nurse calling with questions about Covid after she did not receive answers when seeking in-person care, and another was a Health Surveillance Assistant (or community health worker) who called to inquire about

how many people in the country have contracted Covid and how many have been cured.

Age of client

Clients ranged in age from 18 years-old to 32 years-old, with two-thirds of them between 21 and 29 years-old.

District

Calls were distributed across twelve different districts, including Lilongwe, Ntcheu, Kasungu, Zomba, Dowa, Karonga, Dedza, Nkhotakota, Mzimba North, Mulanje, Chitipa, and Phalombe. Each district featured one call, with the exception of Lilongwe, Ntcheu, and Kasungu, from which there were two calls per district.

REASONS FOR CALLING

All callers had questions about Covid, and when HLWs asked what their reason was for calling, the most common questions fell into the following categories.

What Callers Wanted to Learn (number of callers)*	Illustrative Quotes (Transcript number)
How can coronavirus be prevented? (n=3)	<i>"I want you to assist me on how we can avoid Coronavirus disease."</i> (Transcript 12)
How does coronavirus spread? (n=4)	<i>"I want to know how you can get corona."</i> (7)
How many in Malawi have contracted and/or recovered from coronavirus? (n=2)	<i>"I want to know how the statistic is...for the coronavirus disease to date."</i> (4)
What are symptoms of coronavirus? (n=3)	<i>"I want to ask about corona...what are the signs?"</i> (9)
Whether/how to get tested for coronavirus? (n=2)	<i>"I am asking for advice, should I get tested because I am pregnant so I am a bit worried, what if it is Covid."</i> (10)
What to do after having been exposed? (n=2)	<i>"Ok, me, I am one of the exposed, one of my fellow friend is exposed and is Covid positive, so I do not know what should I do. I went to the hospital, I was not assigned they were just toasting us around the hospitals so we gave up and went back home. So I do not know how best should I handle myself."</i> (6)

	<p><i>"At our work office there have found one and I was one person who had direct contact with her. Right now she is on isolation and I was not concerned but my boyfriend was complaining about headache and had sign of it. And he has Covid and this I am serious that I can be infected from him. Now people are giving me remedies but I am not yet sick and I am not feeling anything. So I want to know how long does it take for a person to get sick. I am also taking remedies like ginger, honey and adding lemons. And then I boil them, I have four remedies and so does these remedies have any effect on the child that I can miscarry? I also want to know how long I will take before I get sick." (8)</i></p>
<p>What is the treatment for coronavirus? (n=1)</p>	<p><i>"So I am saying that suppose I get sick after 7 -14 days what would you recommend I eat or drink for me to get cured?" (8)</i></p>

*note that the total is 17 since some callers cited multiple reasons for calling.

COVID questions and fears

Pregnancy-related

Callers 6, 10 (see quote above), and 12 specifically mentioned their pregnancy status in regards to Covid concerns during their initial sharing of why they called the hotline.

"Alright, yesterday I was better but today hmmmh, so I am afraid because I am also pregnant."

—Caller 6

"My question is that if a mother is pregnant and has been found with coronavirus disease, will the baby be infected too?"

—Caller 12

That said, the majority of callers simply shared a general question about Covid when asked why they were calling. In fact, it was often not until the registration of the caller, when it is standard procedure to ask female clients if they are pregnant, that it was discovered that the caller was pregnant. Later in the call, however, several women did express their questions and fears in relation to pregnancy.

For example, after receiving advice about how to prevent Covid, Caller 9 asked "but will I go to the waiting home?," inquiring as to whether she should still be planning to travel to the maternity waiting home given the situation with Covid (to which the HLW advised, yes, "you will go to the waiting home. People are delivering babies as we speak...as of now, you will go to the waiting homes

but at the waiting homes, you should also adhere to the preventive measures of coronavirus").

The key Covid questions/fears expressed in relation to pregnancy specifically included:

- A general increased concern given pregnancy status and what contracting Covid would mean
- Whether coronavirus can be transmitted from mother to baby
- Whether the caller should wait at a maternity waiting home prior to delivering in a facility

There were five callers (or 1/3 of the group), however, who for the entirety of the call did not ask anything about how pregnancy and Covid might interact, such as the Health Surveillance Assistant who simply wanted to know the statistics of those contracting and recovering from Covid.

What to do if symptomatic

Two callers reported symptoms and sought guidance on next steps. Caller 6 reported feeling a stuffy nose and headache and feared they could be signs she is positive for Covid. Caller 6 was exposed and relayed a negative experience with facility care in which she waited at the hospital all day to get tested for Covid, and ultimately had to return home without having been attended to. It is noteworthy that Caller 6 is a nurse who works at the hospital, and even then, "...[she] was assisted like that," and has troublesome implications for wait times that non-medical staff will face in accessing Covid testing and services.

Caller 10 also shared symptoms of headache, runny nose, and shortness of breath, and called for input on how she should proceed.

“...well I have a flu and I think I am just being paranoid, it’s been about 3 or 4 days ago when I starting getting sick. I was not feeling ok like sometimes I would also run out of breath because I am also pregnant. So I am afraid, what if I have Covid, so yes. But today I am feeling a bit better, it’s just my nose that it’s a bit stuffy and the other days I had headache and I was taking paracetamol and I was doing steaming. So I do not know, I am asking for advice, should I get tested because I am pregnant so I am a bit worried, what if it is Covid.”

—Caller 10

COVID KNOWLEDGE AND INFORMATION

Sources of information on Covid

HLWs do not specifically ask callers where they receive their information, but several callers proactively shared that radio and the community are their key sources of information when it comes to Covid.

Source of information on Covid	Illustrative Quotes (Transcript number)
 <p>Radio</p>	<p><i>“Like here, people are saying that there is no coronavirus here in our village. But the way it is announced in the radio, we are hearing that it is spreading tremendously. So how can you assist us?</i></p> <p><i>...I asked this question because in the past I had a radio and I was getting information regularly. So when my radio was broken, it was difficult for me to get this information... so when people were saying that coronavirus is not here in the village but in Lilongwe, we were just agreeing to it.”</i></p>
 <p>Community</p>	<p><i>“But there are others that are getting cured because we are hearing from people on the radio that they are getting cured. So those that are getting cured, is it from medicine or what? What is happening?” (13)</i></p> <p><i>A HLW also implied the utility of radio as a means of information dissemination—when Caller 9 attempted but failed to list common symptoms of Covid, the HLW asked whether the caller listens to the radio. (9)</i></p>

Peer, community, & societal influence

Several callers relayed the beliefs, attitudes, and influence that peers and community members have in relation to Covid.

Peer/community influences

Several callers shared community attitudes towards Covid that conflict with preventative measures against the virus, such as community members laughing at those who attempt to protect themselves with masks, and disregarding advice on how to mitigate risk since fate is what determines whether it is one's time to die. Others in the community have offered home remedies, asserting that it will prevent one from getting sick and from dying of Covid.

On the other hand, we also see that these women callers may be able to influence their peers and communities with the information they receive from the hotline. One caller expressed interest in telling others what she learned, to which the HLW responded, *"Yes, you can also tell your friends. And it is also your responsibility to tell*

them that there is this number so they can know more about health." (1).

Societal influences

Societal norms and practices can also play a paramount role in Covid-related attitudes and risk factors. As evidenced by the quotes below, we can see that society can mitigate risk, in the case of businesses closing to work from home. It should be acknowledged that this is not always feasible, but is notable that some businesses who were able to did make this significant shift.

We also see that both Caller 15 and the HLW acknowledge that it would be inappropriate and unfair to ask a husband and wife to isolate from each other if the husband is not showing any symptoms. That said, the two do imply that if he were to test positive for Covid that the wife would stay apart from him—while norms around marriage and togetherness may discourage distancing in the absence of a confirmed positive, it seems the norms can be bent if there is a definitive diagnosis.

Peer, Community, Societal Influence	Illustrative Quotes (Transcript number)
<p>Peer/Community</p> <ul style="list-style-type: none"> Mocked for wearing masks Belief that fate determines time to die and do not need to take precautions against Covid Provide home remedies Desire to share information with others 	<p>Caller: <i>"I made for myself those things you put on the mouth but if we wear them, people laugh at us saying that here in the village, the disease is not yet here but in Lilongwe."</i> (1)</p>
	<p>HLW: <i>"We should also make sure that we do not shake hands with other people</i> Caller: <i>but here people don't really care about that</i> HLW: <i>Okay. Just try to school them that shaking hands is not good because we may not know what other people touched before meeting us</i> Caller: <i>no they say that if it's fate then it's our time to die</i> HLW: <i>I see. But try to explain to them that we don't go out scouting for death</i> Caller: <i>True</i> (15)</p>
	<p>Caller: <i>"Now people are giving me remedies but I am not yet sick and I am not feeling anything."</i> (8)</p>
	<p>Caller: <i>"So I was saying that can we also tell our friends?</i> HLW: <i>yes, you can also tell your friends. And it is also your responsibility to tell them that there is this number so they can know more about health. Even just calling so that they can listen to messages."</i> (1)</p>

<p>Societal</p> <ul style="list-style-type: none"> • Companies start working from home • Against norms to social distance from husband 	<p>Caller 10 shared that her company shifted to working from home. (10)</p>
	<p>Caller: "Yes. But what am saying is that am married here and I sleep with my husband but people say don't sleep close to anyone so that you avoid coronavirus. So what can we do?..."</p> <p>HLW: You also asked that you are married so how is it practical to stay apart with your husband right?..."</p> <p>Caller: okay, yah I can only keep apart when he seems sick</p> <p>HLW: yes, that's true. We can't tell you to keep apart from your husband unless the hospital has confirmed that he has coronavirus disease. But for now, just make sure that your husband washes his hands with soap every time he gets home.</p> <p>Caller: alright</p> <p>HLW: sure, we can't tell you to keep apart</p> <p>Caller: it would be unfair indeed to tell me to keep apart with my husband</p> <p>HLW: yes that's correct...because you are married. (15)</p>

Prior knowledge about Covid

When callers expressed wanting to learn about Covid, the HLW sometimes asked the caller what they already knew about Covid to get a baseline sense of their existing knowledge. Generally speaking, callers relayed accurate, albeit sometime incomplete, information about Covid and how to prevent it. For example, a caller might mention hand washing as an important prevention method but not mention wearing masks, or might know that cough is a common symptom but not share that fever is also common.

Prior knowledge on Covid	Illustrative Quotes (Transcript number)
<p>Hand-washing importance</p>	<p>HLW: "What do you know about the prevention of corona to this date?"</p> <p>Caller: Washing hands with soap every day." (2)</p>
	<p>HLW: "Okay. Do you know other ways on how to avoid coronavirus disease?"</p> <p>Caller: Yes.</p> <p>HLW: What are the ways? Mention some.</p> <p>Caller: We should be washing our hands with soap frequently." (15)</p>
<p>Social distancing importance</p>	<p>Caller: "Yes. But what am saying is that am married here and I sleep with my husband but people say don't sleep close to anyone so that you avoid coronavirus. So what can we do?" (15)</p>
	<p>Caller: "...I am asking for advice, should I get tested because I am pregnant so I am a bit worried, what if it is Covid...plus I have young children...so when you tell them not come to the bed they are not listening.</p> <p>...</p> <p>The last time I went out was I don't know when, I went to Chipiku shopping, that is the only time that I went out." (10)</p>

Transmission	Caller: "They are saying that you should not touch the eyes, nose and mouth..." (13)
	Caller: "We should be holding our nose and mouth when sneezing...we should also not kiss each other...they also say that when coughing or sneezing, we shouldn't splash our sneeze to our friends around us." (15)
Symptoms	HLW: "Alright, what have you heard about Covid-19? Caller: I just heard that you feel cold, cough." (14)

Myths and misinformation about COVID

While many callers started with a base of accurate knowledge, at times callers shared myths and misinformation held by themselves and/or their communities, as demonstrated in the cases below.

Hotline worker response to myths

HLWs directly addressed the myths and misconceptions, advising callers that the given belief was untrue, and continuing on to share the relevant facts. In Call 13, for instance, the HLW states unequivocally that the virus knows no racial or geographic bounds and that all are susceptible. The HLW in Call 1 also plainly countered myths—the HLW pushed back strongly against the community members saying that Covid is only in the capital city, stating "that is a lie" and underscoring how important it is for the woman to protect herself, as it is very possible Covid is spreading in her village and it is not known/visible.

Myths and Misinformation	Illustrative Quotes (Transcript number)	HLW Response
<p>Signs and symptoms</p> <p>Swollen face and pimple on mouth</p>	<p>HLW: "alright, what do you know about corona so that I can start from there.</p> <p>Caller: about corona, I know about swelling of the face</p> <p>HLW: swelling of the face, alright, what else?</p> <p>Caller: they say a person has a pimple on the mouth.</p> <p>...</p> <p>HLW: what else do you know?</p> <p>Caller: that's all." (9)</p>	<p>HLW: "this disease is dangerous, people are dying and because it is easy to get infected with it. It is also preventable. The signs of this disease is coughing, flu, high fever, headache and sore throat. You can prevent this disease by; regular soap hand washing, avoiding touching the nose and mouth." (9)</p>
<p>Who is susceptible</p> <p>Only Caucasian and Asian people can contract coronavirus</p>	<p>Caller: "so why is it that at the beginning people were saying it is only affecting white people, Asians and what about us black people. Now it's not only just Asians or white people but everyone." (13)</p>	<p>HLW: "people were saying that because at that time, the disease was only at the white peoples places. But this disease infects everyone even animals...it does not matter if you are Asian, white, it is everyone as long as you are a human being. So the people who are at risk of this disease are the elderly, those who have chronic illnesses like TB, sugar, heart disease asthma and also those who have HIV. Young children as well and women who are pregnant." (13)</p>

<p>Treatment and non-severity of Covid</p> <p>Home remedies for Covid will prevent you from getting sick and prevent death</p>	<p>HLW: “so if you are drinking lemons or honey it does not affect on pregnancy.</p> <p>Caller: but do they minimize the Covid? or people are just saying like it is either if you have it, you cannot get sick or even if you get sick you will not die? If you add these remedies.”</p>	<p>HLW: “ok here, those are traditional and we focus on medical after research done in labs but those are general thinking of people. So if we think in the traditional sense, those boost the immunity. It’s not about cure but boosting the immunity. So we cannot say that it cures or kills the virus those remedies. It is a matter of boosting the immunity system if it is weak.” (8)</p>
<p>Where Covid has spread</p> <p>Covid is only in the cities</p>	<p>Caller: “Like here, people are saying that there is no coronavirus here in our village. But the way it is announced in the radio, we are hearing that it is spreading tremendously ...I made for myself those things you put on the mouth but if we wear them, people laugh at us saying that here in the village, the disease is not yet here but in Lilongwe...I asked this question because in the past I had a radio and I was getting information regularly. So when my radio was broken, it was difficult for me to get this information... so when people were saying that coronavirus is not here in the village but in Lilongwe, we were just agreeing to it.” (1)</p>	<p>HLW: “They are lying because the coronavirus is everywhere whether in the village or in town...it is everywhere... so the main issue is to follow the ways of preventing coronavirus because you cannot know if a person has coronavirus or not. So saying that in the rural areas there is no coronavirus is a lie...so as you are pregnant like that, you are at risk of getting sick and die because of this disease... so you should compile to preventive so that you protect yourself and the unborn child.</p> <p>Caller: ... so when people were saying that coronavirus is not here in the village but in Lilongwe, we were just agreeing to it.</p> <p>HLW: uuh that is a lie and it could also be possible that in your village there is someone with coronavirus and you may not know him.” (1)</p>

Covid information provided by the HLWs

In addition to tackling specific myths and misinformation shared on the calls, the HLWs offered a breadth of information about Covid and how to protect oneself. HLWs addressed callers’ initial question (e.g. how does it spread) and then often expounded to give more context on the situation and how to mitigate risk (e.g. remember to wash hands with soap).

Note that incorrect information was occasionally shared with callers. The false information appears in red font in the table below, and will be discussed further under “Hotline Worker Performance: Accuracy of Information.”

How to prevent coronavirus

Nearly all of the HLWs covered important prevention measures, such as washing hands, wearing masks, and avoiding crowds. It was also common for HLWs to stress the importance of cooking meat thoroughly, so as not to contract Covid from an animal with the virus.

How does it spread

HLWs described how Covid can be passed from “watery things” including saliva, mucous, sweat, vomit, and blood.¹ HLWs also gave specific examples of how it can spread, and cautioned against traveling in minibuses as other travelers may be infected and thus able to spread the virus.

Statistics on coronavirus in Malawi

HLWs who were asked to share the current statistics on Covid seemed knowledgeable on the numbers tested, testing positive, recovered, and died. Although we have not fact checked the numbers shared against the official statistics from that time period, HLWs seemed to know the statistics easily and without pausing the conversation to search for the statistics, thanks to the Covid-19 Daily Info Updates circulated by the Ministry of Health each day.

Symptoms of coronavirus

HLWs were adept at sharing the common symptoms associated with Covid, and described fever, coughing, congestion, breathlessness, sore throat, diarrhea, and flu-like symptoms as key symptoms to look for. Some HLWs also cautioned that symptoms will not always be present in a person with Covid, and also highlighted that loss of taste and smell could be symptoms too.

Testing next steps and importance

Some women called hoping to learn more about testing, and HLWs were able to connect them with the

appropriate resources and made sure the women had paper to write down the phone number for the Covid testing line. The HLWs stressed the importance of being tested after exposure, especially given that one can be asymptomatic and still have the virus and be contagious. The HLWs explained to the callers what to expect of the mobile testing service and encouraged one caller to report back to CCPF with feedback on the process.

Pregnancy and coronavirus

Some women raised a specific concern about Covid and the fact that they are pregnant, to which HLWs responded directly. Others simply had general questions about Covid, but once the HLW learned of her pregnant status, they often underscored the importance of preventive measures given her heightened risk. They explained that pregnant women have weakened immune systems and therefore must take great caution to minimize their risk of exposure.

While this section focuses on Covid-related information, further below we will explore that several HLWs also leveraged the opportunity to discuss general well-being and healthy behaviors during pregnancy.

Topics Covered by HLWs	Illustrative Quotes (Transcript number)
<p>How to prevent contracting coronavirus</p> <ul style="list-style-type: none"> ● Wear masks ● Avoid crowds ● Maintain distance from others ● Wash hands with soap ● Use hand sanitizer if possible ● Cook meat thoroughly 	<p>HLW: "Alright, to answer about the issues you have asked, we can explain that to prevent corona the first thing is what you already said, washing hands frequently. Secondly, avoid going to places where there are a lot of people....to add to his, you should wear masks all the time." (2)</p> <p>HLW: "also, if we've seen someone who has flu or is coughing or has fever, let's make sure we stay away from them by keeping a distance of at least 1 meter. These are some of the signs of coronavirus disease so it's better to keep away because you can't really be sure...Lets also avoid shaking hands because you never know what the other person touched prior to your meeting...also, lets avoid being in groups and we must keep a distance of at least 1 meter all the time. And when we are in a crowd or at the market, let's always make sure we wear face masks. Coronavirus easily spreads via the air so the face mask is important because it blocks the contaminated air. If we can afford, we can also buy hand sanitizers so that we apply it frequently when in crowds...Also when we buy meat, let's make sure we boil it thoroughly because coronavirus disease can also be spread through animals." (12)</p> <p>HLW: "Also when we buy meat, let's make sure we cook it thoroughly because animals can also spread coronavirus. If meat is not properly cooked, we may get sick." (15)</p> <p>HLW: "This disease is dangerous, people are dying and because it is easy to get infected with it. It is also preventable. The signs of this disease is coughing, flue, high fever, headache and sore throat. You can prevent this disease by; regular soap hand washing, avoiding touching the nose and mouth...avoiding hand shaking, avoid group gatherings, avoid unnecessary travel and also eating meat that is not properly cooked...you can also prevent by wearing a mask." (9)</p>

<p>How does coronavirus spread?</p> <p>Coming into contact with infected substances/surfaces</p> <ul style="list-style-type: none"> • Saliva • Mucous • Vomit • Bedding/clothing • Sweat • Blood 	<p>HLW: "I will start by answering how coronavirus spreads. So these viruses, are found in watery fluids from a person who is sick with coronavirus. Like saliva, mucous, sweat, vomit and blood. So these viruses enter in the body through mouth and nose and eyes. So if you touch the watery fluids and also touch the eyes or mouth then you take the viruses in your body.</p> <p>The other way the disease spreads is by using the clothes or beddings of someone with corona so that means that you can also get the coronavirus disease. The other way is if you eat meat that has the coronavirus but the meat was not properly cooked. Son make sure the meat is cooked well because it has the also the coronavirus, so make sure the meat is cooked properly." (11)</p>
<p>Statistics on how many have contracted and recovered from coronavirus</p> <ul style="list-style-type: none"> • Number tested • Number testing positive • Number recovered • Number of deaths 	<p>HLW: "...As for now this disease is in Malawi and it did not stop to exist. And as of now it is in Africa, Asia and Europe. So when this diseases stops to exist we will hear all around the world. And the statistics is high because every day we receive data that the number are going up. If this disease stops to exist we will hear on the radio, news, churches. We will hear in different areas and we will believe that this disease has stopped to exist...So those who were tested for coronavirus are 48,113...and those that were confirmed to be with disease are 5638, 5638 people, those who were cured are 3724, and those who died because of this disease are 177." (5)</p>
<p>Symptoms of coronavirus</p> <ul style="list-style-type: none"> • When they present • Fever • Coughing • Congested nose • Diarrhea • Sore throat • Shortness of breath • Loss of taste • Loss of smell • Asymptomatic 	<p>HLW: "The first question you have asked is that how long does it take to show the signs. So firstly, the signs of corona start to show after 14 days...7-14 days is when you start to see signs, so you will count that how many days have passed from the day you contacted that person. So you know when the 14 days will elapse." (8)</p>
	<p>HLW: "So the main issue is to follow the ways of preventing coronavirus because you cannot know if a person has coronavirus or not. So saying that in the rural areas there is no coronavirus is a lie." (1)</p>
	<p>HLW: "Thank you very much for calling us, if you have any questions about Corona, you will call us. Maybe before you can go, let us discuss about signs. These are fever, shortness of breath, no sense of smell and taste. And others also have sore throat...so these signs are common to many people." (2)</p>
<p>Testing next steps and importance</p> <ul style="list-style-type: none"> • We cannot know our status unless tested • Call the testing line • How the testing works 	<p>HLW: "Alright but this does not mean that if a person has all those sign then has Covid -19. So to know if a person has Covid-19 or not that person needs to get tested. If a person has malaria, they also have a fever and body pains so you cannot rule out completely." (14)</p>
	<p>HLW: "So we are saying that if you are experiencing Covid signs, you are not supposed to go to the hospital...so I want to give you the number of those that are testing Covid...so have somewhere were you could write.</p> <p>Caller: alright, yesterday I was better but today hmmmh, so I am afraid because I am also pregnant.</p>

	<p>HLW: [provides contact information for testing service]</p> <p>Caller: are these from central?</p> <p>HLW: these are from mzuzu...so they are mobile and you can call them... we will be happy if you give us feedback on how they have assisted (6)</p> <p>HLW: "So sometimes it can be flu like malaria but the way it is now, you can just be tested so you are not worried especially that you are pregnant. So I will give you numbers. Those numbers of the people that stay in that district and they test you at your house. So find somewhere were you could write I should give you the numbers...so you will call them but those numbers are billed unlike this one, you have called us on which is free.</p> <p>Caller: yeah</p> <p>HLW: yeah, so you will call them and tell them of the symptoms as you have said.</p> <p>Caller: ok, should I call them now?</p> <p>HLW: yes, you can call anytime you are free and they can visit you at your home. Did you go to the hospital? (10)</p>
<p>Pregnancy and coronavirus</p> <ul style="list-style-type: none"> ● Increased risk to pregnant women due to weakened immune system ● Possible contraindications in pregnancy for Covid treatment ● Transmission from mother to baby 	<p>HLW: "And those that will come to test you with corona and take the samples then they will come again with a prescription of the medication you are supposed to take in regards to the way you are as a pregnant woman. A pregnant person has their own medication, there are other medication a pregnant person cannot take. So those prescribing the medication are health workers, they are experts and they know that these medication a pregnant person cannot take so they will give you an appropriate prescription for a pregnant person." (8)</p> <p>HLW: "But also adhere to the preventive measures of coronavirus as I have told you because as you are pregnant the immune system reduces. And coronavirus attacks people with a reduced immune system. So you should follow all that so that you can protect yourself and the unborn baby." (9)</p> <p>HLW: "So as you are pregnant like that, you are at risk of getting sick and die because of this disease.</p> <p>Caller: ok</p> <p>HLW: because your immune system is weak.</p> <p>Caller: alright</p> <p>HLW: so you should compile to preventive so that you protect yourself and the unborn child." (1)</p> <p>HLW: "However, the baby is prone to be infected when it is born and not when unborn. This is because you touch the baby with your body fluids like sweat, so if the sweat is from a person with coronavirus disease, the baby will also get sick.</p> <p>Caller: ooh</p> <p>HLW: also when the baby has just been delivered, his or her immunity is low so he or she can easily get infected with coronavirus.</p> <p>Caller: alright</p> <p>HLW: But the baby can be protected when the mother is taking good care of herself and keeping the baby away from people." (12)</p>

HOTLINE WORKER PERFORMANCE

Training Background

HLWs generally received relatively sparse training on Covid-19 symptoms and prevention, with most attending a 1–3 hour training. Others, however, reported not receiving any training at all (see upcoming Method 3 report). All HLWs did have access to the MOH informational pamphlet which covers key information about Covid-19, including modes of transmission, risk mitigation recommendations, risk groups, incubation period, etc.

Accuracy of information provided

The majority of the information shared by the HLWs was factual and medically accurate, and key to quelling the spread of the virus and enabling callers to identify common symptoms that may indicate infection.

That said, there were a couple pieces of information that HLWs routinely shared with callers that were not

accurate. The virus has not been shown to transmit through blood nor sweat, and there has not been evidence that eating undercooked meat from an animal infected with Covid would lead to transmission.

The inaccurate statements were shared often enough that it was not an outlier HLW who harbored the misconception, but rather a pattern in which the inaccuracies are circling throughout the HLW staff. Indeed, an informational pamphlet on Covid that was produced and circulated by the MOH does state that the virus can be transmitted through blood and sweat, thus explaining why the misconception was widely held.

It is unknown where the information about cooking meat properly originated from, but should be explored and addressed with HLWs.

While it is critical that CCPF be a source of trusted, accurate information, it is also noteworthy that the only inaccurate statements shared would lead to someone erring on the side of additional caution, and did not pose any direct health risks to callers.

Accurate	Inaccurate
<ul style="list-style-type: none">• Wear masks• Maintain at least 1 meter distance• Virus is transmitted through saliva, mucous, vomit• Covid does not necessarily transmit from mother to fetus in utero• Virus enters through mouth, nose, eyes	<ul style="list-style-type: none">• Virus is transmitted through blood and sweat• Must cook meat thoroughly to avoid transmission from improperly cooked meat

Scope of information provided

Regardless of whether the client initiated questions about pregnancy and Covid, or pregnancy in general, several of the HLWs took the opportunity to share key pregnancy-related information and reminders with the callers.

This demonstrates that although women called for Covid information, they also received health promoting information about pregnancy and safe delivery. The huge bump in community awareness was due to Covid, but once clients call they are able to access a suite of health information.

The table reflects that several of these pregnancy discussions occurred during Call 15, which ultimately lasted 36 minutes. Receiving this much time with a provider is great, although calls of this duration would not be sustainable overall given that the hotline already struggles to address call demand.

General Pregnancy Information Provided

Illustrative Quotes (Transcript number)

Responding to myths/questions

- What to eat/not eat during pregnancy
- Sexual intercourse during pregnancy

Caller: *“Is it true that you are not supposed to eat eggs while pregnant?”*

HLW: *no that’s not true. Eggs are actually good for the development of the baby.*

Caller: *Alright*

HLW: *yes you should be eating eggs. Eggs can’t affect pregnancy...the uterus is different from the stomach so it’s alright*

Caller: *okay. So how about eating soil?*

HLW: *Okay. Soil is not allowed because it may contain worms which can affect the pregnancy. You may replace soil with sweets...sweets or any other nutritious food*

Caller: *how about sweet potatoes?*

HLW: *yes that’s okay*

Caller: *even every day?*

HLW: *yes no problem*

Caller: *how about chinaka? (a root that is eaten as protein)*

HLW: *that’s okay, chinaka is food*

Caller: *some people say a child will be born with a rooty body*

HLW: *no that’s not true, it can’t happen. Like I said, a uterus is separate from the stomach*

Caller: *some say fried maize is also bad*

HLW: *not at all, those are just myths. But things like soil are what’s not allowed*

Caller: *another thing my sister, so if you mix maize flour with fried groundnuts and make porridge, is that alright?*

HLW: *that’s actually a good mixture because you may gain nutrients like carbohydrates, fats and proteins which will help you during delivery*

Caller: *how about fresh groundnuts?*

HLW: *yes that’s okay. You may eat if you would like...we only discourage soil.*

Caller: *mmmmh? I crave soil many times*

HLW: *Soil is bad because it may affect you plus the baby*

Caller: *alright...but mmm sister.... (inaudible voices) (15)*

Caller: *alright. So can I have sex with my husband?*

HLW: *yes no problem*

Caller: *oh so what if he hurts my womb?*

HLW: *no it depends on how you do it. You can even have sex until the delivery day*

Caller: *oh really? What if he says I should deliver first?*

HLW: *if he says no himself, that’s okay but you shouldn’t shun him because he may end up going to other women*

	<p>Caller: no, it's me who want sex but he doesn't want it. In fact now he wants to go away</p> <p>HLW: just explain to him that there is no problem at all...for now it's okay to have sex but when you deliver, you may sometimes have some bruises so it's advisable not to quickly have sex. So if you don't do it now, it may take a while to have sex with your husband which may sometimes cause problems." (15)</p>
<p>Danger signs and referral to facility care</p>	<p>HLW: so with your 5 months pregnancy, you are experiencing what we call minor disorders, that's why you are having some discomforts. You get it?</p> <p>Caller: yes</p> <p>HLW: It's just some minor issues when the pregnancy is still developing but if the problems persists, you must rush to the hospital for check up to avoid affecting the pregnancy.</p> <p>Caller: alright I see. (15)</p>
<p>Attending prenatal scale appointments and general tips</p>	<p>HLW: but before you cut maybe, you have said that you are pregnant. Have you started going to scale?</p> <p>Caller: yes</p> <p>HLW: it's important to go to scale and also at seven months, you need to have all the things needed for child birth.</p> <p>Caller: alright</p> <p>HLW: things like cloth wraps, black plastic paper, all those things that they tell you to have at scale, you should have them. In a situation where labor has started unexpectedly you can just carry these things.</p> <p>Caller: alright</p> <p>HLW: don't forget to eat food of different nutrition value.</p> <p>Caller: alright</p> <p>HLW: food belonging to 6 food groups and also do not forget to sleep in a mosquito net because as you are, your immune system has weaken</p> <p>Caller: hmmh</p> <p>HLW: so it is important to sleep in a mosquito and eat different food types." (12)</p>
<p>Birth preparedness</p>	<p>Caller: "but will I go to the waiting home?"</p> <p>HLW: yes; you will go to the waiting home, people are delivering babies as we speak.</p> <p>Caller: alright</p> <p>...</p> <p>HLW: are you going to scale again or you are going straight to the waiting homes?</p> <p>Caller: I will go to scale</p> <p>HLW: when are you going?</p>

	<p>Caller: on the 30th</p> <p>HLW: did you finish all the vaccines?</p> <p>Caller: yes</p> <p>HLW: did you buy all the necessary items?</p> <p>Caller: yes I bought all the necessary items</p> <p>HLW: as of now, you will go to the waiting homes but at the waiting homes, you should also adhere to the preventive measures of coronavirus. do you have any question?</p> <p>Caller: nope that is all.</p> <p>HLW: that's all, I hope you are ready for child birth.</p> <p>Caller: yes I am ready</p> <p>...</p> <p>HLW: You should have a good day.</p> <p>Caller: thank you</p> <p>HLW: but also when your scale date approaches do not forget." (9)</p>
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On the other hand, there were some instances in which HLWs did not take advantage of the opportunity to counsel on key health promoting behaviors in pregnancy. Additionally, most HLWs offered a breadth of Covid information to each caller, but in some instances the information could have been more complete—for example, Caller 15 did not want to isolate from her husband if he was exposed by asymptomatic, and the HLW could have taken the opportunity to articulate testing resources and best practices in mitigating risk.

Customer service provided

Strengths

HLWs demonstrated high levels of knowledge and customer service throughout the calls, as expounded on in the table below.

Exploring callers’ baseline knowledge

HLWs often asked callers what they already knew about a given topic before diving in to a wealth of information that callers may already possess. This approach honors callers’ existing knowledge, and it also presents an opportunity to see if there are any gaps or misunderstandings in their knowledge that HLWs may need to address.

Checking callers’ understanding

Many HLWs also paused throughout to ask callers to share their understanding of what was discussed during the call and gave space for questions. This offered an opportunity to reinforce important learnings, and to

reveal any gaps or misunderstanding that might persist, and which the HLW could then address.

Inviting additional questions and future calls to CCPF

HLWs generally concluded calls by asking callers if they had any remaining questions, and then encouraged callers to not hesitate to call back with questions, or to listen to IVR messages. On five of the calls, the HLW specifically informed callers of the IVR messages related to pregnancy.

Building strong rapport

The HLWs forged strong rapport with the callers, offering a high level friendly customer service. In two calls in particular, especially strong bonds appeared between caller and HLW over the course of the conversation. In one instance, featured below, Caller 9 was so appreciative of the HLW’s time and assistance that she wanted to name her child according to whatever the HLW recommended. The HLW suggested that she should not be the one to name the child but the pregnant woman insisted, and so the HLW offered her own name if the baby is a girl. The interaction sounded quite genuine, according to the transcriptionist, and is a testament to the strong bonds that can be formed through the phone in a short period.

In another case, the HLW and caller had a dynamic discussion about the caller’s strong desire for twins. The HLW referenced the pregnant woman’s desire throughout the conversation and they seemed to form a very friendly yet professional relationship in little time.

Customer service strengths	Illustrative Quotes (Transcript number)
Exploring callers' baseline knowledge	HLW: "What do you know about the prevention of corona to this date?" (2)
Checking callers' understanding of what HLW has shared	HLW: "have I answered your question clearly...is there any question where you don't understand?" (12)
	HLW: "So in short, [caller's name], what have we discussed on the questions you asked?" (13)
	HLW: "What have I explained are the Covid-19 signs?" (14)
Inviting additional questions/ use of CCPF	HLW: "Is there another question? Caller: No, that's it. We just want those who have this disease to be assisted. HLW: So [caller's name], if you have any question, you are free to call us." (4)
Building strong rapport	HLW: "Do you already have a name [for the baby]?" Caller: no, you can also give me HLW: hahaha, the father of the child should give. Caller: I would be happy if you give. HLW: we should give the name when the child is born but now the father should give before you go because when a child is born we want to give the name there and then. We just give two names; if it a boy then this name and if it is a girl then this name, because we are giving certificates and the names that you give to use on the ID is what the child uses. Caller: But I have really liked you and I want you to give me HLW: so you have liked me and you want me to give the name? Caller: indeed HLW: ok, if it is a girl, she should take my name, Thandiwe Caller: that is good." (9)

Areas to improve

Although overall the level of customer service provided was quite high, there were some interactions that fell short of the high standard that HLWs and the hotline pursue.

Properly explaining the registration process and purpose

Although most HLWs did explain that they would be registering the client in the system before responding to their questions, it generally was as basic as "firstly we will register you and then we will discuss about that" (3). Only a subset of those offered an explanation of why the client was being registered, and usually offered a simple, "alright, so before I assist you, I will record you in our registry because this helps us to know how many people we have talked to" (1). In the case below, the

HLW jumped immediately in to the registration process without any context offered to the caller. Although this was an outlier, it underscores the importance of refreshing HLWs on how to properly welcome and orient the caller before starting in with demographic questions.

Honoring the caller's preferred language

This only came up in one instance, but the HLW in Call 6 asked the caller if they preferred English or Chichewa. When the caller suggested Chichewa, the HLW said they understood that the caller wanted to speak in English and noted,

"...we have English [call] queue, Chichewa queue, and Tumbuka queue, so I have answered you on a Chichewa queue. So we have to stick to Chichewa because every call here is recorded."

Before this, the caller did say that either language would be fine, but the HLW and call flows should be able to flex to meet the callers’ needs—even if the caller entered in the “English” queue, there should be a process to adapt to their preferences, and the recording of the calls should not preclude the HLW from speaking in the caller’s preferred language.

Reacting to client laughter

In a couple calls the client laughed in response to a question. One of the HLWs handled it well, and calmly explained these are standard questions they ask, and

asked if these are not questions that health workers at facilities also ask? The woman agreed that indeed they are and the laughter subsided. In the case highlighted below, however, the HLW seemed to reprimand the caller at the first sign of laughter. It is worth noting that HLWs have had to field prank calls with groups of friends laughing and taking up the phone line and not having any true desire to talk with the hotline workers. While that is an experience they have had, it is also important to recognize that some callers may be laughing out of shyness or nervousness, and that a more understanding and patient approach is advisable.

Customer service areas to improve	Illustrative Quotes (Transcript number)
<p>Properly explaining registration process and purpose</p>	<p>HLW: “what do you know about the prevention of corona to this date?”</p> <p>Caller: washing hands with soap every day</p> <p>HLW: alright, how old are you?</p> <p>Caller: you should also tell us about the signs of it</p> <p>HLW: we will discuss that, how old are you?</p> <p>Caller: I am 18 years old</p> <p>HLW: what is your nearest hospital?” (2)</p>
<p>Honoring the callers’ preferred language</p>	<p>HLW: ok, we should talk in English or Chichewa?</p> <p>Caller: ok let’s talk in Chichewa.</p> <p>HLW: I have understood in English.</p> <p>Caller: whatever the language anyway</p> <p>HLW: alright fine because we have English queue, Chichewa queue and tumbuka queue, so I have answered you on a Chichewa queue. So we have to stick to Chichewa because every call here is recorded. (6)</p>
<p>Reacting to client laughter</p>	<p>HLW: is the hospital name primary?</p> <p>Caller: Kamboni (laughing)</p> <p>HLW: [Caller’s name], please be serious if you laughing I will not take you seriously am going to assume that you are not serious.</p> <p>Caller: yes, I want to ask how the disease is.</p> <p>HLW: yes and if I am asking you questions, do not laugh because I will assume we just want to play. Do you stay in Kasungu? (4)</p>

Client satisfaction

Although several of the 15 calls included in the sample ended prematurely due to a disconnected line, those whose calls did complete often expressed their thanks and appreciation to the HLWs. Some seemed especially appreciative and cited that they had learned from the conversation.

Client satisfaction	Illustrative Quotes (Transcript number)
Clients especially appreciative of the service	<i>"Thank you very much and I am glad that I have known the truth because we were just hearing hear-says. So I am thankful and I will continue preventing." (1)</i>
	HLW: <i>"Is there any question where you don't understand?"</i> Caller: <i>"No, it's alright. You've explained well...thanks very much." (12)</i>
	<i>"Thanks, I have learnt a lot of things. I appreciate a lot." (15)</i>

CHALLENGES WITH CCPF AND DURING CALLS

Several challenges also arose in regards to the calls or the CCPF service itself, as highlighted below.

Long wait time to be connected with HLW

When the HLW encouraged the woman to call again in the future, she took the opportunity to say the HLW should pick up the phone sooner, as she had waited more than 30 minutes to get through on the current call.

Registering callers in the database required significant time

In 3 of the 15 calls, it required the HLW to repeat themselves several times and HLW and caller had to try to discern the nearest hospital and sometimes it could not be easily located in the server (Calls 1, 5, 14). The excerpt from Call 1 above demonstrates the back and forth that HLWs and callers engaged in for the 3 calls,

which led to a significant amount of time devoted to the conversation around location and demographics. All calls did require time for registration but not to that extent.

Poor network connection led to difficulty hearing and disconnected calls

An unstable network connection created difficulties for the HLW and caller to communicate on several of the calls. In at least 3 of the calls, the call is dropped while caller and HLW are still mid-conversation, and even in mid-sentence as demonstrated in the quote above from Call 7.

Limitations due to the nature of a call hotline

In Call 8, the HLW references the fact that they cannot prescribe any medication to the caller that might be needed since it is a hotline, serving as a reminder that although the hotline can play an important function, it cannot replace in-person services.

Challenges	Illustrative Quotes (Transcript number)
Long wait time to be connected with HLW	Caller: <i>next time you should pick up quickly up until 30 minutes, I even memorized all those messages.</i> HLW: <i>ok let me tell you what happens.</i> Caller: <i>mmmm</i> HLW: <i>this phone is called by more than 5000 people so you are put on a queue and you have to wait for you to be assisted. By the time I am talking to you, I can also see that on the line there are a lot of people that I also need to talk to.</i> Caller: <i>mmmm</i>

	<p>HLW: so those are also listening to the messages you were listening to, waiting that I should talk to them after I am done with you. So it is not possible, those who call fast are also answered fast since it is a queue.</p> <p>Caller: alright, I understand</p> <p>HLW: next time you can also call us and do not hesitate it is important to listen to the messages. Thank you have a good night.</p> <p>Caller: thank you have a lovely night too. (8)</p>
<p>Registering callers in the database required significant time</p>	<p>HLW: what is your nearest hospital?</p> <p>Caller: Thoyo</p> <p>HLW: Soya?</p> <p>Caller: Thoyo</p> <p>HLW: Thoyo?</p> <p>Caller: yes</p> <p>HLW: is it a government facility.</p> <p>Caller: yes</p> <p>HLW: which district is that?</p> <p>Caller: Here at Dedza</p> <p>HLW: But the hospital you are mentioning is not found here in our database on Dedza district. What traditional authority TA is that?</p> <p>Caller: Chauma</p> <p>HLW: Chauma?</p> <p>Caller: yes</p> <p>HLW: alright in Dedza we have these TAs; Kamenya Kadza, Kaphuka, Tambala, Kachinda moto, Kachere, Kampala, Chili ku mwendo. So these are the TAs in Dedza.</p> <p>Caller: Chauma was in Tambala, it was a sub TA</p> <p>HLW: Chauma was in Tambala</p> <p>Caller: yes it is a sub TA</p> <p>HLW: so it is TA Tambala</p> <p>Caller: yes</p> <p>HLW: alright, so in Tambala we have these hospitals, Chipwanya, Kalulu, Nyelele, Mayani, Phombe and Temwete. So which hospital is near to you?</p> <p>Caller: is it Thoyo in TA Chauma</p> <p>HLW: so am saying that, of the hospitals I have mentioned, which one is near to you?</p> <p>Caller: Kalulu</p> <p>HLW: Kalulu (1)</p>

<p>Poor network connection</p>	<p>HLW: <i>hallo...are you travelling?</i></p> <p>Caller: <i>yes</i></p> <p>HLW: <i>you should stop since we cannot hear each other.</i></p> <p>Caller: <i>the second question, you asked how HIV is spread?</i></p> <p>HLW: <i>hallo, hallo</i></p> <p>Caller: <i>hallo</i></p> <p>HLW: <i>hallo</i></p> <p>Caller: <i>I cannot hear you because of network problems.</i></p> <p>HLW: <i>so be in a place where there is network (11)</i></p>
	<p>HLW: <i>alright, are you pregnant?</i></p> <p>Caller: <i>what?</i></p> <p>HLW: <i>are you pregnant?</i></p> <p>Caller: <i>alright</i></p> <p>HLW: <i>are you pregnant?</i></p> <p>Caller: <i>yes</i></p> <p>HLW: <i>alright, when was the last time you had your periods?</i></p> <p>Caller: <i>what? (14)</i></p>
	<p>HLW: <i>"so can you tell me one way a person can get this di... [call disconnects]" (7)</i></p>
<p>Inherent limitations to a hotline</p>	<p>HLW: <i>"so I cannot prescribe you any medication because 1) this is on the phone, 2) you have not been confirmed that you have corona. So the advice I can give you is to continue with the preventative ways so that you do not spread it to others." (8)</i></p>

Discussion and Recommendations

Several key findings and resulting recommendations emerged from analyzing the set of calls. It was notable that very few of the women, all pregnant, mentioned their pregnancy when first sharing the reason they had called. It does not mean that they would not have brought it up later in the context of Covid, as several did, but it was interesting that it was generally presented as a secondary consideration. We observed that, regardless of whether the woman wanted to focus on Covid and pregnancy or pregnancy in general, the HLW often took the opportunity to offer additional information pertinent to the woman—whether it was stressing the importance of staying well when pregnant, or being sure to attend their prenatal care visits, the HLWs seized the opportunity with the attentive callers. Regarding the intersection of pregnancy and Covid, one caller did ask whether she was still supposed to wait at the waiting home prior to giving birth, and a couple callers shared they were extra worried about Covid given their pregnancy status.

It is also worth noting that all but one of the callers was calling for their first time—so although they had not heard about CCPF until it was publicized in the Covid response spotlight, it linked them to a health hotline that can address the spectrum of their and their families' health needs. HLWs also did a good job reminding callers what information they can access through CCPF and the IVR messages, and to not hesitate to call again.

Through the course of reviewing the 15 call transcripts, several key areas to address emerged:

Increase ability to meet demand

As mentioned by one caller and substantiated by quantitative analyses of call data, callers often face long wait times to speak with a hotline operator, and we know that only 6.8% of those who want to speak to a HLW are successful (see Report on Methods 2 and 5).

Addressing the mismatch of supply and demand could be tackled by 1. Reserving calls for those with questions and concerns that are best served by a live operator, and 2. Reducing the length of calls so that more callers waiting in the queue can be routed to an operator.

Reduce the number of callers only asking about statistics

Demand for the hotline has outpaced supply, as demonstrated by the quantitative analyses in Method 5. With that in mind, it is essential that calls with HLWs

prioritized for callers with questions that demand dynamic conversation. It is not the best use of the HLWs' skills and time to recite publicly available statistics. Those who are calling simply to inquire about the sheer numbers of Covid positive cases, recoveries, and deaths should be routed towards alternate means of sourcing this information. This may entail a combination of the following:

- MOH broadcast most recent statistics through established channels and easily accessed avenues (e.g. consistent radio broadcast, MOH Facebook page, etc.)
- Callers who are on hold waiting to talk to a HLW could be played a recording that provides recent statistics. Note that this requires re-recordings and adjustments to the system to stay current, and so hotline management could consider updating once a week, for example.
- Callers who are on hold solely wishing to learn the statistics are encouraged to select the IVR option for Covid, where statistics could be shared. Note that this requires re-recordings and adjustments to the system to stay current, and so hotline management could consider updating once a week, for example.

In Call 4, the client received the statistics they were in search of and closed the call with, “We will also call again in the evening to know the statistics of those that have also been found with the virus”—the HLW responded, “Ok so if you just want to know about the statistics you should just call once a day and not so many times just to ask about the statistics...just ask once a day as the statistics came once a day.” With this interaction the HLW discouraged unnecessary use of the hotline for statistics in the same day, but there should be a systemic way of routing those in search of statistics to another source.

Streamline the registration process

One way to reduce the length of calls without compromising customer service and the amount of time spent counseling clients is to streamline the registration process. As described above, there were several calls which required minutes of clarifying and back and forth between HLW and caller to successfully determine and then locate in the call system the caller's district, Traditional Authority, nearest hospital, etc. The MOH may want to evaluate which data points they are and are not regularly monitoring, and the value-add, and make subsequent determinations on how to simplify and shorten the registration process.

Reach callers on the queue with key Covid facts

Another way to link more callers with pertinent information is to have key messages playing during the time they are on hold. Although this is a small sample of calls, the MOH can consider recording fresh content on the most sought after topics, such as how Covid is spread, what are the symptoms, and how can it be prevented.

Supportive supervision with HLWs to celebrate strengths and identify gaps

Celebrate customer service strengths

This set of calls demonstrated a high level of customer service, and revealed that HLWs are doing a nice job sharing a suite of information about Covid transmission and prevention to equip callers with the facts they need to mitigate risk for themselves and their families. HLWs should be applauded for the friendly, professional, and informative service they provide.

Provide feedback on gaps and areas for improvement

Because the few incidents of sub-standard customer service were so isolated (not explaining the registration process, proceeding in caller's second choice language, and reaction to caller laughing), the results from this review do not seem to warrant staff-wide reminders or instruction. Rather, it underscores the importance of continuing the routine customer service quality audits conducted at the hotline, to be able to identify in near real-time when HLWs are veering off from the high customer service standards and could use additional training.

Bolster training, and correct misconceptions so inaccurate information is not shared

Given that most HLWs have received very little formal training on Covid-19 (to be expounded on in Method 3 report), the MOH should consider implementing a thorough training that also covers currently known

As identified above, there are some few statements being shared widely by HLWs that are inaccurate, which should be addressed through proper training. The root of the misinformation should be addressed with the MOH, as some of their health promotional materials included the inaccuracies and so should be rectified in tandem and in the direct materials as well. Additionally, the hotline supervisor should clarify that Covid cannot in fact be transmitted through undercooked meat, and may want to consider a promptly held mini-refresher or informal training, or at least sharing credible sources in

advance of a larger, more comprehensive training, since the misinformation has been circulating at the hotline for months and should be addressed as soon as possible.

Additionally, we have seen that the known information about Covid-19, and the virus itself, can morph over time. Likewise, misinformation among community members or HLWs could arise as time continues. It would be advisable for the MOH to leverage the existing quality assurance reviews to check for accuracy of Covid-19 information, and course correct as needed.

Conclusion

This method, in which we analyzed 15 calls from pregnant women asking about Covid, revealed initial patterns and findings about the service they received and the types of questions and concerns they are having. Method 4, in which we call these callers back, will shed light on the clients' perception of the care they received, and provide an opportunity to probe deeper on whether and how being pregnant during Covid may have raised unique questions, fears, or hesitations around care seeking, risk profile, actions taken, etc.

Acknowledgements

1. Radio icon by Tom Farrell from the Noun Project
2. Community icon by Fahmi from the Noun Project

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Appendix

Form used to select the final sample of calls.





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<https://iscollab.org/advancing-postpartum-hemorrhage-care/>

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