Breakthrough ACTION Nigeria GHSA

Lassa Fever Insights presentation

Using human-centered design to identify barriers and opportunities against the spread of Lassa Fever in Nigeria

Submitted to: USAID

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USAID FROM THE AMERICAN PEOPLE

Breakthrough ACTION FOR SOCIAL & BEHAVIOR CHANGE

Qualitative Interview of a farmer - Edo

Introduction

Breakthrough ACTION-Nigeria is a USAID flagship integrated social and behavior change (SBC) and risk communication project. Its goal is to increase the practice of priority health behaviors in the areas of malaria; maternal, newborn, and child health, including nutrition; family planning / reproductive health; tuberculosis; and priority zoonotic diseases at the national and subnational levels in collaboration with the relevant USAID implementing partners. One of its main focus is to improve individual and social determinants of health to facilitate individual and household adoption of priority behaviors.

With the help of ThinkPlace, the global Human Centered Design (HCD) lead for Breakthrough ACTION (BA), an HCD process was conducted in Nigeria to identify barriers, enablers and challenges to address Lassa Fever.

This activity outcome is a set of new insights which will later enable the creation of innovative interventions during a "Design & Test phase", packaged in this high-level presentation, to facilitate the engagement of key stakeholders.

Contents

Observation of a food processor making Garri - Ondo

Acronyms

BA	Breakthrough ACTION	**LGA**	Local Government Area
BDM	Behavioral Drivers Model	**MOH**	Ministry of Health
CFR	Case Fatality Rate	**NCDC**	Nigeria Center for Disease Control
FMARD	Federal Ministry of Agriculture & Rural Development	**PHEOC**	Public Health Emergency Operations Centres
FMEnv	Federal Ministry of Environment	**PPE**	Personal Protective Equipment
FP	Family Planning	**RCCE**	Risk Communication and Community Engagement
HCD	Human-centered Design	**SBC**	Social and Behavior Change
HCW	Health Care Workers	**SEM**	Socio-ecological Model
HMW	How Might We	**USAID**	United States Agency for International Development
LF	Lassa Fever		

1

BACKGROUND & APPROACH

Activity context

Lassa Fever is a seasonal disease of epidemic proportions in West Africa. In Nigeria, research shows that poverty is the main driving factor. Consumption of rodents, rodent-related exposures during rural farming, seasonal ecology, and poor hygiene practices are all risk factors for transmission. Nigeria's response to disease outbreaks is through coordination between the state and national PHEOCs that manage deployment of rapid response teams.

Although awareness of LF is high among communities, knowledge about risk factors, symptoms, and perceived benefits of preventative measures is low. Risk perception is also affected by misconceptions of the disease host and methods of transmission, which perpetuates common practices of rodent consumption and bush burning. Poverty and food insecurity are also barriers to preventive behaviors. The animal-human-environment condition of the disease justifies the use of a One Health approach with an emphasis on RCCE. Mass media is the most common RCCE method currently utilized, particularly in Ebonyi state.
Person-to-person community engagement efforts involve community and religious leaders and community HCWs receiving training to increase awareness on identifying symptoms.

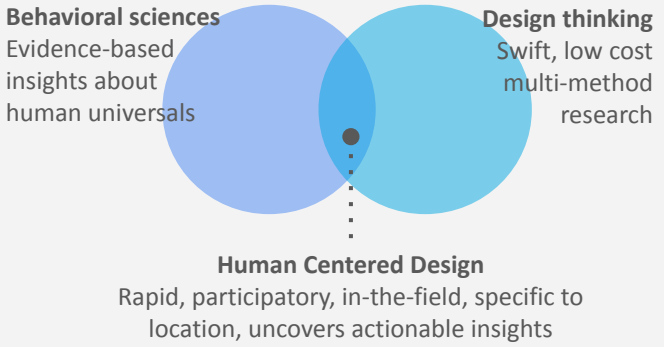
Dead rat found during the observation of a farm - Edo

HCD capacity strengthening workshop - Abuja

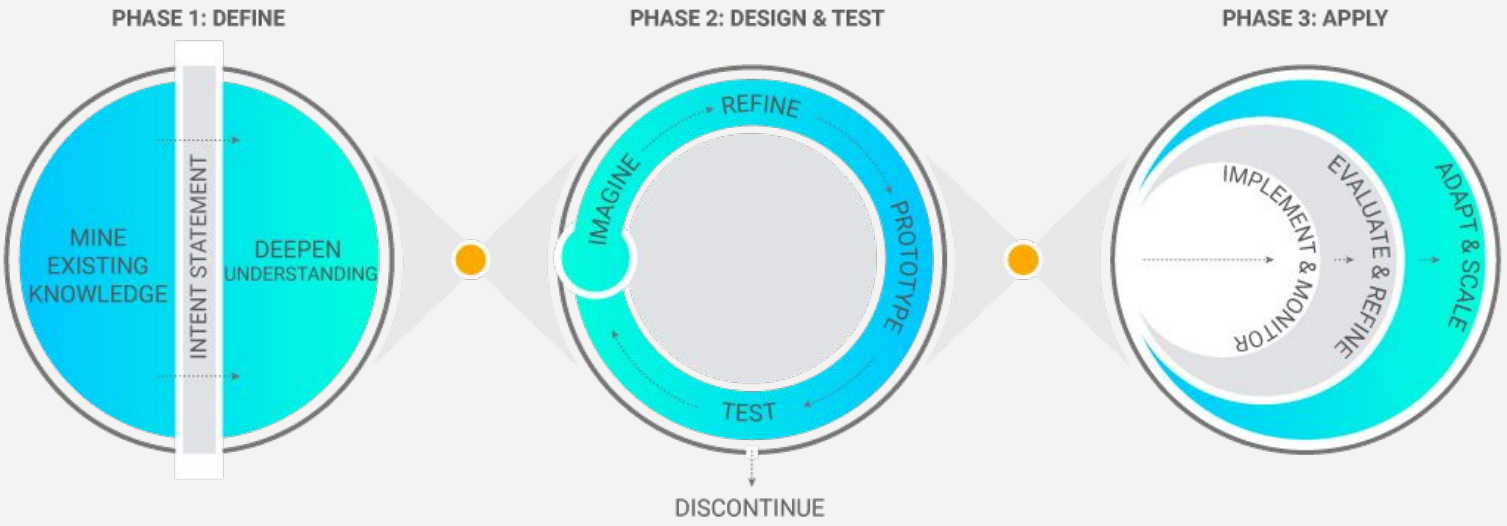
Approach

HCD provides a deep understanding of the behavioral determinants affecting people's ability to affect social change.

An HCD approach was chosen to increase empathy and understanding of Nigerians' realities and lived experiences, so that those might be leveraged into systems-level interventions that bridge the gap between intention and action. By actively engaging diverse perspectives during solution development—including key actors (NCDC, FMARD, FMEnv), BA activity partners, HCD experts and community members and leaders—the HCD approach enables understanding of community members' motivations and barriers to adopting durable measures against LF.



Guiding process - The SBC FlowChart



The SBC FlowChart is BA's design process for SBC activities to address health or development challenges.

Comprised of three phases that align and integrate various disciplines, methods and approaches, the FlowChart draws on tools and techniques from BA partner organizations, resulting in a cohesive and flexible approach.

Disciplines such as SBC communication, marketing science, behavioral sciences, HCD, community capacity strengthening and community engagement bring together their strengths, methodologies, and techniques to create new opportunities for innovative SBC.

The SBC FlowChart process is one of divergence and convergence, iteratively exploring broadly, then deciding how to act in order to address a specific design challenge.

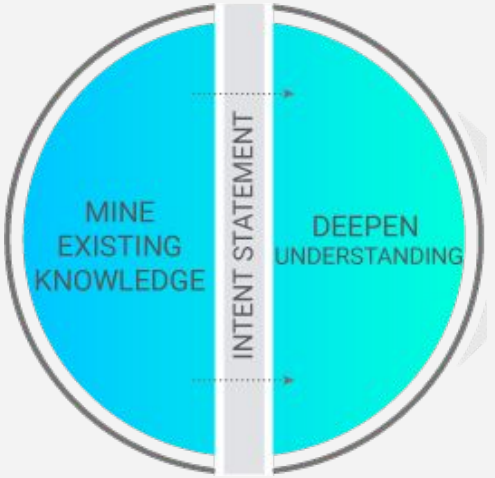
The implementation of the FlowChart is done through three key phases: (1) Define, (2) Design and Test, and (3) Apply. These phases are linked by transitional stages where the strategy is developed and refined. **This activity focuses on the 1st phase.**

Activity Overview

Define phase : definition and objectives

This activity consists of the Define Phase of the SBC Flow Chart. This step establishes the foundational understanding of the problem and context from two perspectives: the existing knowledge and published literature and the new, shared knowledge of lived experiences in households, communities, health systems, and the political environment.

The Define Phase does not seek to simply define the health problem but rather to generate a deep understanding of the problem with all its facets: structural, social, institutional, behavioral, cognitive, and emotional. **The end goal is to inform the creation and test of solutions over the next phase: Design & Test.**



PHASE 1 | DEFINE

Activity kick-off Inception meeting

February 2022

led remotely

Intent workshop & Statement

March 2022 to April 2022

in-person Abuja

Research Protocol & Lines of Inquiry

May 2022 to July 2022

led remotely

Discovery Research

July 2021 to August 2021

3 x capacity strengthening remotely and 2 in-person Field research in person

Insights & HMW

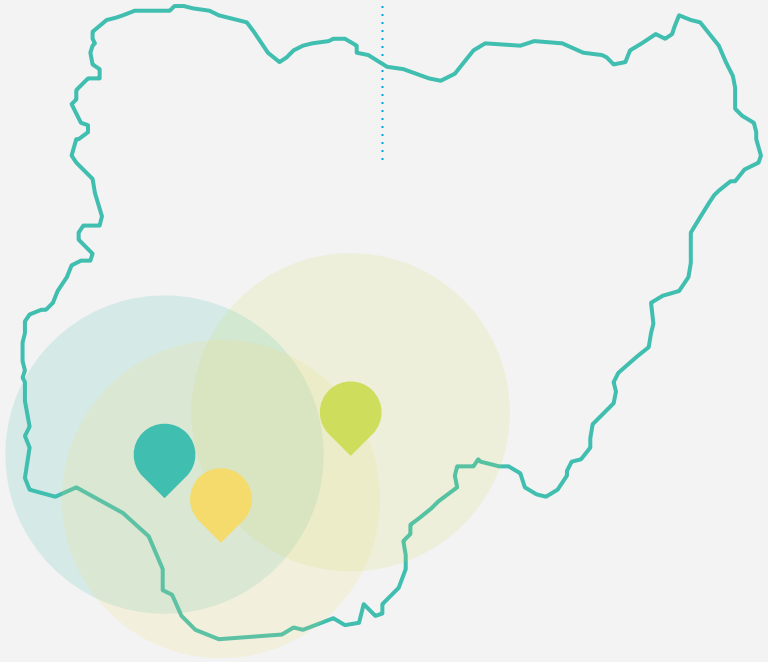
September 2022

led remotely

Design & Test Phase

Geographic scope

Nigeria



Three teams comprised of local, national, and international experts conducted qualitative interviews and observations in three key states, with two wards per state. The locations were selected according to the following criteria:

1. Number of confirmed cases & case fatality rate (CFR)
2. Language
3. Proximity and access
4. Existing community structures
5. Ongoing research activities (specifically in Ondo and Edo)
6. Security for the research teams

The Discovery research was conducted in:

- **Ondo state**: the chosen LGA is Akure South, with a focus on 2 wards (Owode / Imuagu and Gbogi Isikan);
- **Edo state**: the chosen LGA is Etsako West, with a focus on 2 wards (Uzairue Southwest and Auchi iii);
- **Benue state**: the chosen LGA is Makurdi, with a focus on 2 wards (Fiidi and Central Mission).

Benue

Edo

Ondo

Researched audiences

The HCD Discovery team sought to understand the experience, perspectives, beliefs, and attitudes of the cohorts detailed below and the number of participants in the research for each of them. The total sample size of the research was 90 people.

LF survivors
Person who has been affected by LF within the last 2 years, as well as their close relatives, who might be able to help understand their experience.

Household influencers
Person that influences health and food practices, provides advice or controls household finances (e.g. father, grandmother).

Others most at risk
Person living in a rural area, and/or with poor sanitation and crowded living conditions. Health workers attending patients and and pregnant women are also concerned.

Health care professionals
HCW, health center maintenance staff (such as a hospital janitor) and health educators with at least two years of experience.

Farmers & food processors
Person who produces, stores and/or processes food and who (preferably) has been involved in bush burning practices.

Community / religious leaders
Promoters of policies, norms, values etc. that affect many things including the health of their constituents.

2

MINING EXISTING KNOWLEDGE

Desk research

Definition and key findings

BA mined existing knowledge and data to understand the health or development context, the audiences at risk, and their current behaviors, beliefs, and attitudes. Resultant literature review provided the basis for programs to meet with stakeholders and gain consensus on potential avenues for action.

High-level results gleaned from the desk review include:

- Low/poor perception of symptoms and risk factors related to LF despite high levels of awareness of the disease at the community level
  Assumption that LF is transmitted through mosquito and/or dog bites;

- Stigma which makes it difficult for people to seek testing and treatment (HCWs also suffer from stigma after contracting LF);

- High perception of susceptibility and severity after contracting LF but a low perception of benefits of LF preventative practices.
  - Poor hygiene practices
  - Consumption of contaminated foods
  - Poor food production and burial practices

Open air dumping site nearby households - Ondo

Dumping site behind an Infections hospital unit - Benue

Desk research

Recommendations

Recommendations for the steps following the Define phase and/or future interventions include:

- Increased engagement and partnerships with stakeholders to further strengthen data sharing at the state and national levels
- Messaging to the general public should be through a mix of channels and should emphasize preventive measures that aim to contain seasonal epidemics of LF (social media, traditional media, community-based activities, etc.)
- Increase knowledge of IPC strategies, as well as a heightened index of suspicion among HCWs, while enforcing the use of personal protective equipment (PPEs)
- Working with other sectors using the One Health approach such agriculture, environment, and health professionals such as veterinarians.

3

SETTING A SHARED INTENT

Intent workshop

Definition and objectives

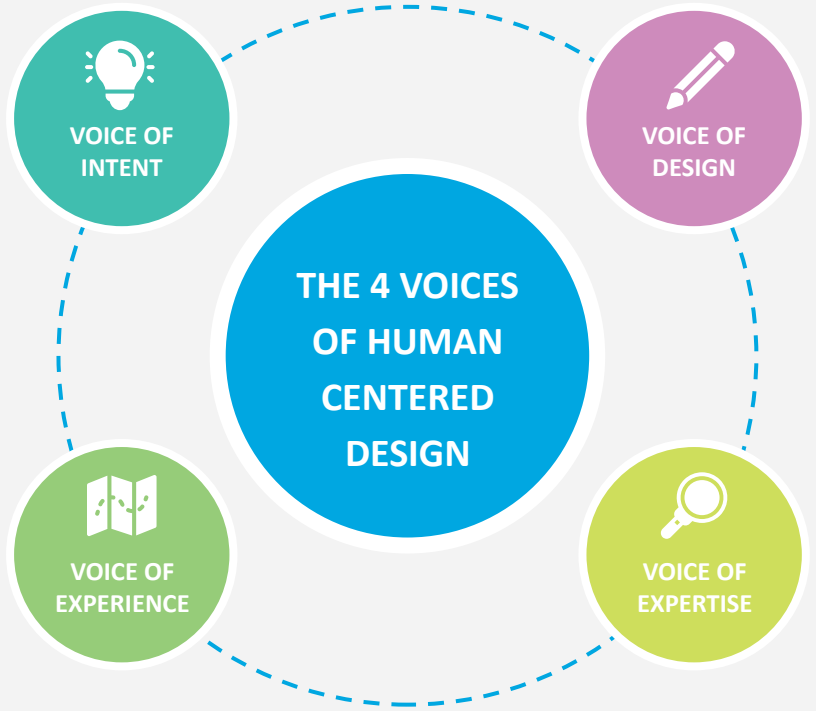
The intent stage sets the activity's scope and provides a strong foundation for any HCD process, by creating clear objectives and directions.

During an Intent workshop gathering the **4 voices of HCD**, which happened at the beginning of the activity, key elements were co-designed to :

- define opportunities for the project
- understand the drivers for change
- set out the current users and who would be affected by the change
- establish a shared vision for the future and desired outcome
- outline a high-level strategy to go from current to desired future state
- state the timeframe for the project.

Views on what is desirable for society, **from government, and the donor organisation**
Gather interest though situation analysis.

HCD experts who synthesize the other voices to inform and build the interventions



Views on what is desirable from the **user, clients, and service providers**

Knowledge about context, what might be possible and what will be viable from **experts on the subject.**

Intent - Central design challenge

How might we **identify current enablers and challenges to the spread of Lassa Fever**, to develop effective preventive and informative social and behavior change interventions in most affected states?

Intent statement - strategic shifts

An intent statement is an early vision document that presents the current state, the desired future state, key audiences, objectives, and a draft theory of change in one page. **At this point, stakeholders critically need to align around a shared objective or problem they would like to solve.**

While aligning around intended audience, stakeholders may choose to narrow their focus based on demographic characteristics or behavioral segments.
Find below the strategic shifts from this activity's intent statement, and the full statement in the Appendix.

FROM	TO
Acknowledging that people are not aware of the symptoms and have low risk perception	**Identifying actual risk factors and symptoms recognition as well as informal information channels to recommend effective communication strategies.**
Identifying how people could act with the right information on risk factors and symptoms recognition	**Identifying how and why people trust various—and sometimes conflicting—sources of information, and enabling them to trust the right information and act on risk factors and symptoms recognition.**
Identifying which behaviors bring about high risks of transmission	**Identifying which preventive measures have been most adopted and why, to create and implement new strategies fostering durable behaviors against transmission.**
Collecting data and investing in communication campaigns and RCCE programs to prevent LF from reoccurring in the community.	**Identifying and implementing behavior change strategies focused on identified barriers to prevention, in addition to communication campaigns and RCCE programs.**
Identifying practices related to food consumption, processing and storage	**Recommending safe behaviors around popular food consumption, processing and storage, while promoting safer and affordable protein alternatives.**

4

DISCOVERY METHOD

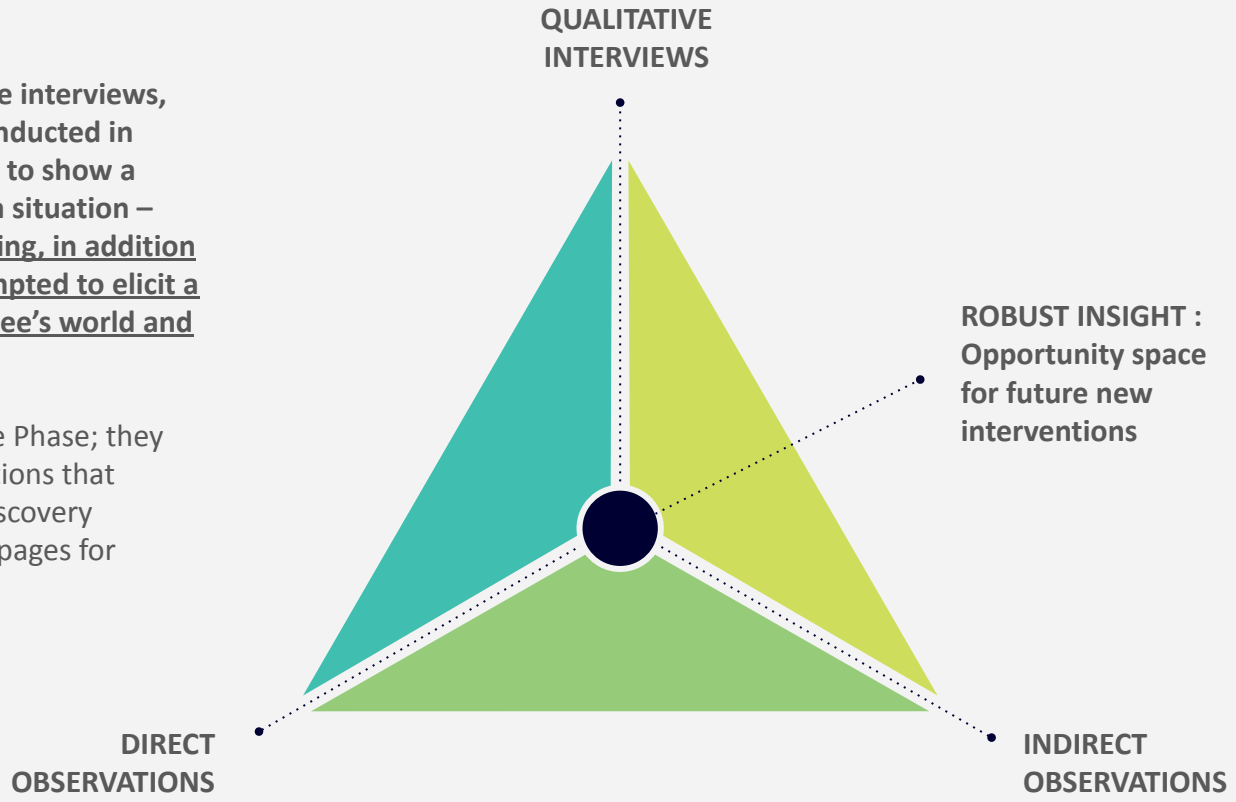
Discovery research tools

Definition and objectives

Discovery research is tailored after HCD's Ethnography research methods to deeply understand people, their environment and behavior, as well as influential relationships and messages.

Research techniques such as qualitative interviews, observation and participation were conducted in parallel, when participants were asked to show a relevant place, tool, or an example of a situation – e.g. how they perform a task. By showing, in addition to telling, the Discovery research attempted to elicit a deeper understanding of the interviewee's world and experience.

Lines of inquiry (LOIs) guided the Define Phase; they represented the key and strategic questions that guided how the team conducted the Discovery research on the field. See the two next pages for more details about the LOIs.



Lines of Inquiry

CHALLENGES TO INVESTIGATE, IDENTIFIED DURING INTENT	WHAT DO WE WANT TO KNOW? WHAT ASSUMPTIONS DO WE WANT TO (UN)VALIDATE?	PERSPECTIVES WE WANT TO GET INFORMATION FROM
A The continued lack of awareness about Lassa Fever	• The status of awareness and knowledge on high-risk behaviors, recognition and prevention of LF • The knowledge of signs and symptoms recognition • Both knowledge and awareness of LF's spread and transmission • Awareness of treatment and its accessibility • Awareness of the disease consequences (post-conditions) • Awareness of conditions susceptible to be fatal cases (pregnancy)	Health Care professionals (HCWs + janitors) Community and religious leaders People most susceptible to contracting LF Lassa Fever survivors
B Poor environmental hygiene & waste management	• Practices and behaviors for food transformation on the household and vendor levels: from groceries, cooking habits, and cookware washing, to rat consumption. • Harvests picking, storage and transportation practices • Practices and behaviors for food storage • Water access/storage for drinking , cooking and cleaning, and behaviors influencing water use and storage • Housekeeping, cleaning habits/rituals, and personal hygiene (frequency/periodicity) that could influence transmission • Waste management practices in each of the states (dumps, garbage collection) • Rat control methods • Frequency and practices surrounding bush burning, and status of awareness on the correlation with LF	Health Care professionals (HCWs + janitors) People most susceptible to contracting LF Household Influencers Farmers and food processors

Lines of Inquiry

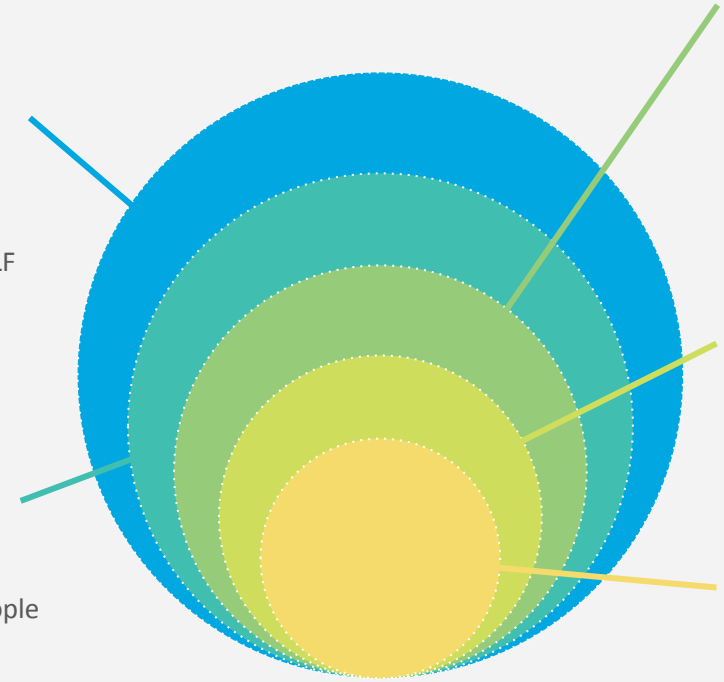
CHALLENGES TO INVESTIGATE, IDENTIFIED DURING INTENT	WHAT DO WE WANT TO KNOW? WHAT ASSUMPTIONS DO WE WANT TO (UN)VALIDATE?	PERSPECTIVES WE WANT TO GET INFORMATION FROM
C Beliefs, myths & misconceptions	• Identify sources of information about LF • Identify traditional and religious beliefs/practices related to LF treatment and prevention • Identify beliefs, myths and misconceptions on how people think LF is transmitted and how it spreads	Household Influencers Community and religious leaders People most susceptible to contracting LF Lassa Fever survivors
D Stigmatization toward affected people & caretakers	• The community's perception of the disease • The community's perception of infected people, and the resulting behaviors towards them • The reasons behind LF's association with poverty	Health Care professionals (HCWs + janitors) Community and religious leaders People most susceptible to contracting LF Household Influencers Farmers and food processors
E The low index of suspicion among health care workers	• Knowledge of symptoms and high-risk factors/behaviors in the workspace • Knowledge of protocols to attend and treat LF cases and highly suspected cases • Knowledge and attitudes towards PPE and waste management protocols • Protocols on giving LF diagnosis and information to infected people (care, household protocols to prevent others' infection, post-conditions risk)	Health Care professionals (HCWs + janitors)

5

DATA SYNTHESIS & ANALYSIS

Research findings - Across the SEM

Research findings were categorized through the lens of the Social Ecological Model (SEM), providing framing to understand factors affecting behaviors and helped present the dynamic interrelations between environmental, social, personal, and intrinsic factors. See the Appendix for details at each level (from pages 54 to 58).



Organizational level
- Stigmatization by/towards HCWs
- Poor sanitary practices in Health Services
- Households waste attracts & feeds rats
- Lack of scientific knowledge among HCWs
- HCWs insufficient training on LF
- Wrong diagnosis & lengthy test results

Interpersonal level
- Homemakers' inaccurate perception of safe practices
- Community leaders' key role in raising awareness
- Farmers low perception of risk factors

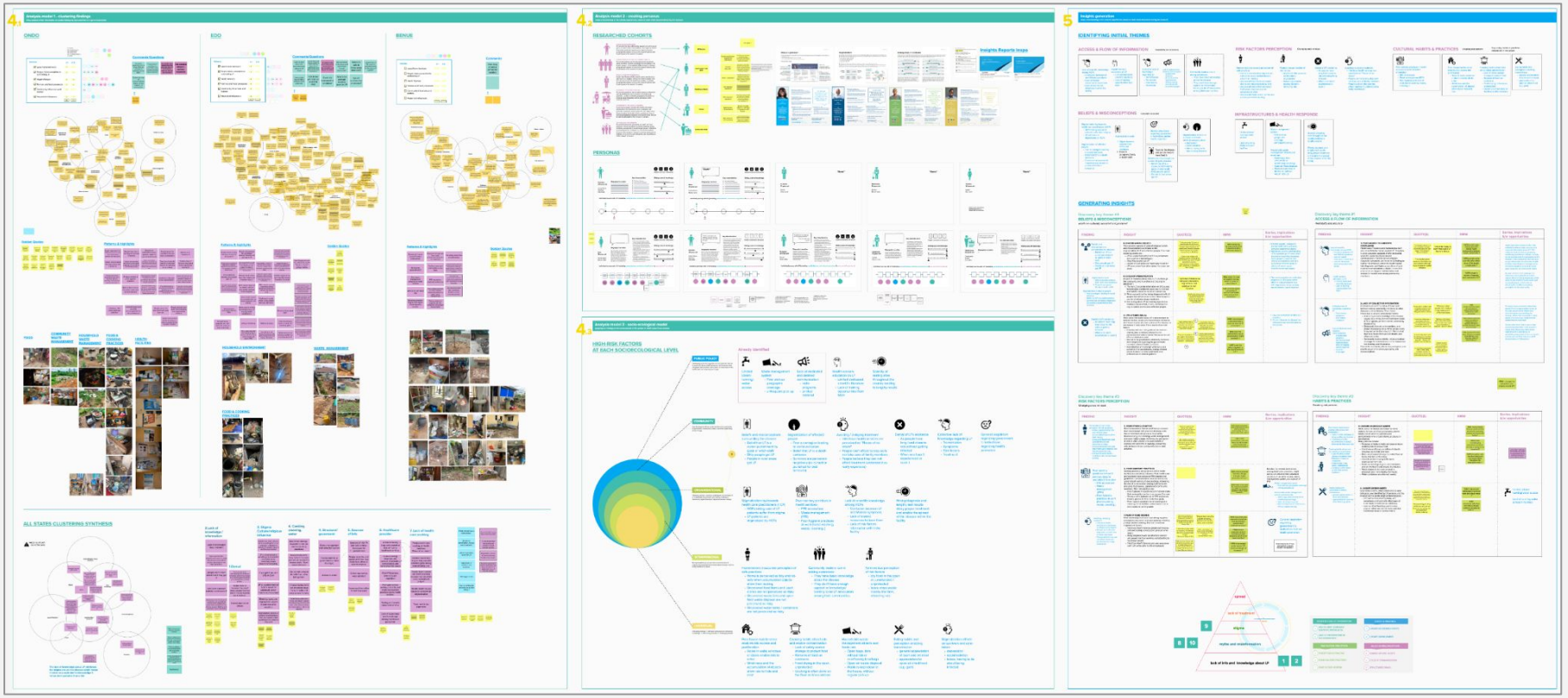
Individual level
- Poor house maintenance enables rats access & proliferation
- Cooking habits attract rats & enable contamination
- Household waste management attracts & feeds rats
- Eating habits & perception enable transmission
- Stigmatization affects survivors & caretakers

Public policy level
- Limited access to clean and/or running water
- Waste management issues
- Lack of dedicated & detailed LF communication
- Low prevalence of LF testing centers

Community level
- Belief & misconception surrounding LF
- Stigmatization of affected people
- Avoiding / delaying treatment
- Denying LF's existence
- Collective lack of knowledge
- General skepticism regarding government communications

Synthesis & analysis approach

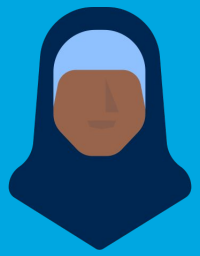
Several steps and tools were used to manage and reveal the rich data collected throughout this qualitative research. **Debriefs, notes and photos were reviewed state by state, to identify trends grouped in themes.** Recurring patterns and themes across states were then cross-referenced and analysed to form insights : **pieces of information connected in new ways to re-perceive a situation in a way that leads to an opportunity for action.** Finally, emerging opportunities within each insight were proposed as “How might we” questions (HMW) to guide the design and test process. Find the detailed process here.



6

PERSONAS

A persona is a fictional representation of an archetypal user of a service, system, process or product we are seeking to understand and improve. Personas illustrate how different users interact with the system, including their needs, behaviors, beliefs abilities and the context from which they are engaging with the system.



ROSE

31 years old

Homemaker

BIOGRAPHY

Rose lives with her husband and two young kids. Besides being a homemaker she sells food that she prepares at home. She has some knowledge about LF and has heard about some cases from friends and neighbors.

INSIGHTS MOST RELEVANT TO THIS PERSONA

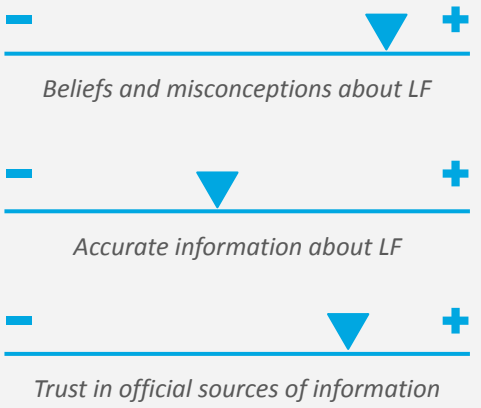
2 3 6 9 10

"There are many influencing behaviors, but witchcraft is the main cause and cases travel from other places. "

KEY CHARACTERISTICS

- Is very busy with cooking for her family and her shop
- Is in charge of the housekeeping practices at home and fixes the house however she can
- Takes the garbage out every day, and disposes of it in the neighborhood dump by her house
- Knows the main symptoms of LF (fever, tiredness)
- Believes LF could be caused by witchcraft or a punishment from the gods but also recognizes it comes from rats
- Knows that strict housekeeping practices can lower the chances to have rats at home, but uses chemicals
- Eats bushmeat, and rats on a few occasions
- Would advise family members to seek care as soon as possible but heard costs are very high when it comes to infectious diseases.

SLIDING SCALE OF KNOWLEDGE



MOTIVATIONS & NEEDS

Rose is the household caretaker, driven by the need to protect and support family members. Her shop activity is providing an additional income to the household and brings her pride. However, she would need a better kitchen, with more sealed containers, and running water for her to cook and clean to keep rats away.

FRUSTRATIONS & PAIN POINTS

Due to watching the kids and cooking for her shop, Rose lacks time to take care of the house up to safe standards. She complains from the waste management system as the closest pick up spot is far from her house, and difficult for her to reach while watching the kids. She is discouraged to keep rats away as neighbours don't observe safe behaviors.

PRECIOUS

20 years old

Lassa Fever Survivor

BIOGRAPHY

Precious lives with her parents in an urban area. She is a LF survivor, but only her family, neighbors and friends know about it. Because of a long recovery and of stigma, she has been unemployed since her graduation from school a year ago.

INSIGHTS MOST RELEVANT TO THIS PERSONA

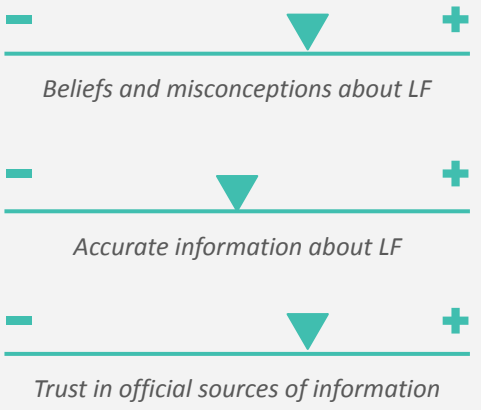
2 3 4 6 9 10

"Some people believe it is not curable; once you have LF, you are gone, and it is not so; I'm a living testimony"

KEY CHARACTERISTICS

- Contracted LF about a year ago, and only heard rumors about it before
- Her mother was the one taking care of her while being sick, before and after the hospital
- Struggled for months to fully recover from LF
- Heard beliefs and misconceptions on LF, and does not have a clear picture of transmission patterns
- Is afraid to look for a job has she knows rumors ran about her being sick in her district
- Suffers from the stigma running in her community and has socially isolated herself
- Knows that a clean house lowers the chances of having rats at home.
- Buys garri from a neighbor, and is unsure if it caused her to be sick

SLIDING SCALE OF KNOWLEDGE



MOTIVATIONS & NEEDS

Precious acknowledges that she would need more information and clear guidelines to avoid the disease but especially to break the stigma attached to it. She would like to tell her story so people believe LF is real and that it could happen to anyone but she is afraid of being stigmatized even though she has fully recovered from it. She would like to become a nurse.

FRUSTRATIONS & PAIN POINTS

Since she contracted LF, Precious feels ashamed and the center of the negative beliefs she hears. She suffers from depression, struggles to go out of the house and break the taboo surrounding her.. Even if she is a LF survivor and got a few guidelines from the doctor, she still believes in hearsay and has a low risk perception of the disease.

Dr AYEBO

37 years old

Doctor

BIOGRAPHY

Dr Ayebo works in a private clinic in a suburban area and has worked there for 10 years. He has a lot of experience treating LF cases. He is a generalist, highly educated and likes to keep himself up to date with new scientific information.

INSIGHTS MOST RELEVANT TO THIS PERSONA

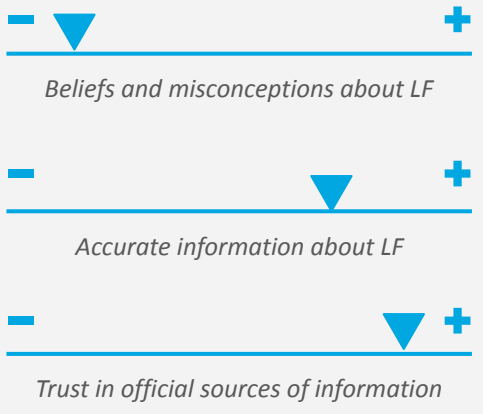
1 6 7

"We hear a lot of radio spots about other health issues but less about Lassa. Lassa information is seasonal"

KEY CHARACTERISTICS

- Is very strict about washing his hands before and after a consultation, but doesn't always use a mask or gloves
- His office is clean and has running water, but the consultation table is not sanitized
- He truly believes if people don't realize how important housekeeping and cooking/eating practices are to prevent LF they won't have a proper perception risk of the disease
- He thinks there's not enough sensitization around LF as it is for other contagious diseases and that it shouldn't be seasonal but constant.
- About PPE he acknowledges that in some cases there is not enough access to it but also that there must be more awareness of its importance among health practitioners
- From his experience, he believes that there should be more training and access to information for health practitioners as there is for Malaria, TB, and COVID.

SLIDING SCALE OF KNOWLEDGE



MOTIVATIONS & NEEDS

Dr Ayebo really enjoys to learn and teach as well. He thinks is important to sensitize communities constantly through different channels and start the LF conversation from different stakeholders.

FRUSTRATIONS & PAIN POINTS

Dr Ayebo worries about the low index of suspicion about LF among the health community, he thinks this also causes a poor use of PPE. He has trouble believing that people can deny the true existence of LF when there are so many cases.

BABATUNDE

42 years old

Farmer

BIOGRAPHY

Babatunde lives with his mother, his wife, and children. He grows cassava and corn on his farm next to his house. The family processes garri to sell. They eat rats and bush meat occasionally that he gets from his hunter neighbor.

INSIGHTS MOST RELEVANT TO THIS PERSONA

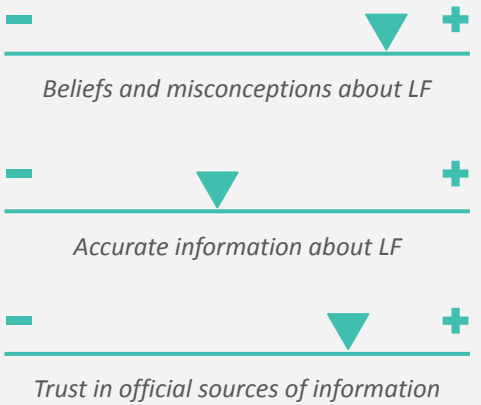
2 3 6 8 9 10

"I heard people saying lassa is caused by a white rats with 8 breasts but i have never seen those kind of rats before"

KEY CHARACTERISTICS

- Denies Lassa Fever because he doesn't know anyone who has had it, he thinks that if there is LF must be in other states
- Has eaten for a long time and he hasn't been infected, so he doesn't believe what he hears on the radio or TV about the disease.
- Uses chemicals to control rats but regards food/harvesting storage practices, in his house they are likely to attract rats as well as waste management habits.
- The organic waste is collected to be buried and in his household, the other waste is thrown in a shared dump a few steps away from his house/farm
- Practices bush burning
- Wouldn't go to the hospital because he thinks is place of no return

SLIDING SCALE OF KNOWLEDGE



MOTIVATIONS & NEEDS

Babatunde and his family are very traditional on their cooking/eating habits, they enjoy garri and eating rats once in a while. He wouldn't stop it because of what he hears on the radio or TV, because he thinks those communications are just money ventures.

FRUSTRATIONS & PAIN POINTS

There is a very irregular waste collection system in Babatunde's village, he thinks the authorities should do something about it if they really are worried about the diseases that could be spread by rats.

Chief IDOWO

60 years old

Doctor

BIOGRAPHY

Chief IDOWO is a local chief in a suburban area and used to be a public servant. He plays a central role in the well-being of his community. He attended a training about LF once, given by local authorities, and has faced several cases in his district.

INSIGHTS MOST RELEVANT TO THIS PERSONA

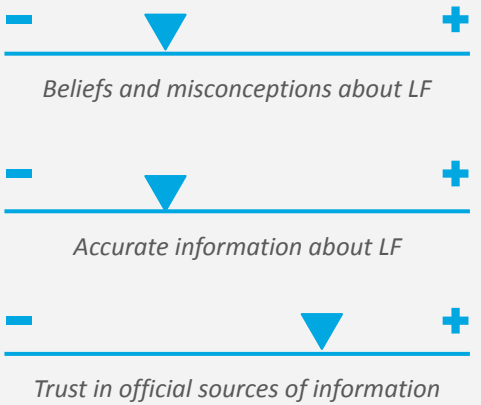
2 6 9

"People don't trust the radio but religious leaders and health care workers yes"

KEY CHARACTERISTICS

- He thinks that there should be more awareness about LF in his community through trusted people like HCW and religious leaders
- He acknowledges his influence in the community to disseminate information but he thinks doesn't have enough knowledge to do so, but he'd be willing to do so if there were some trainers available
- He has some basic knowledge about transmission, symptoms and treatment.
- He acknowledge that there's a lot of stigma in the community around it.
- Knows a few cases in the community that got complicated because of late diagnosis and treatment.
- He recommends seek care as soon as possible
- He eats garri processed at home and doesn't eat rats

SLIDING SCALE OF KNOWLEDGE



MOTIVATIONS & NEEDS

Chief Idowo is eager to learn more about LF to diffuse information and raise awareness in his community, especially people who are not receiving official information but hearsay from friends and neighbors. He believes key trusted actors in the community could be health behavior advocators, like him, if they had more information.

FRUSTRATIONS & PAIN POINTS

He worries about how stigma has affected LF survivors of his community. He believes this also affects care-seeking, as he knows community members are afraid of rumors.
He has heard that people are afraid of going to get LF treatment because it is too expensive and a place of no return.

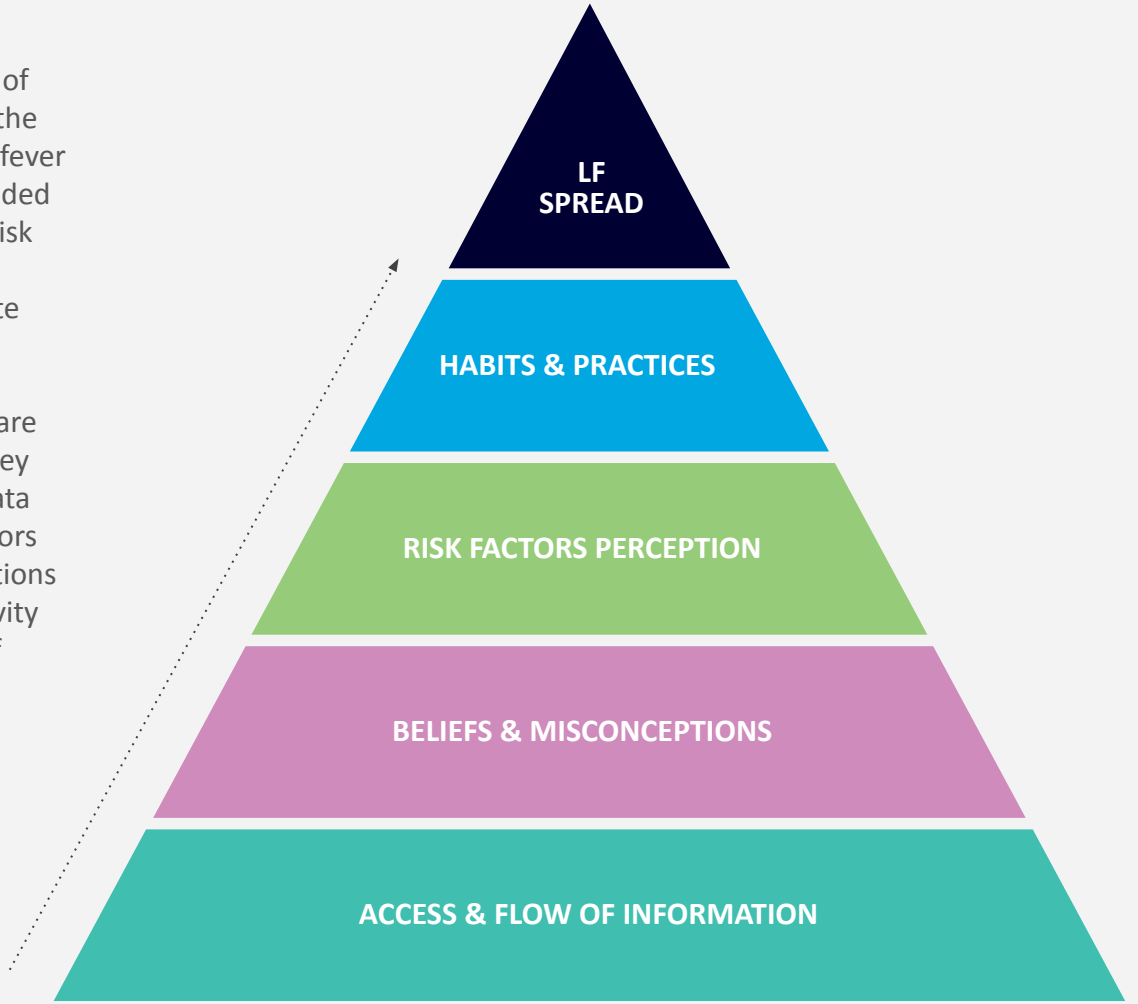
7

INSIGHTS & HMW QUESTIONS

Insights pyramid of incidence

Four themes arose from the synthesis and analysis of research findings. These themes are connected as the consequences of one another. The spread of Lassa fever persists thanks to daily habits and practices embedded in people's lifestyles, they don't perceive them as risk factors, since there are a lot of beliefs and misconceptions about it as a result of an inadequate flow and not enough information.

For each of these four themes in the pyramid that are causes of the LF spread in Nigeria, we build some key insights based on the most recurrent patterns in data we found especially to understand people's behaviors and perceptions. These insights would us find solutions to explore in the Design and Test phase of this activity based on the "How might we" (HMW) questions of each of these insights.



Discovery theme:

Access & Flow of Information

Desired key behaviors :

- Increased awareness of LF among communities and HCWs
- Increased high risk perception and suspicion among HCWs
- Faster diagnosis of the disease in any type of healthcare facility
- Regular conversations from various sources over LF in the community

Insights

1. INSUFFICIENT DEDICATED SCIENTIFIC KNOWLEDGE
2. LACK OF INFORMATION IN THE COMMUNITY

Lines of Inquiry connected to this theme

- **A** **The continued lack of awareness about LF**
- **B** **Beliefs, myths & misconceptions**
- **C** Poor environmental hygiene & waste management
- **D** **Stigmatization toward affected people & caretakers**
- **E** **The low index of suspicion among HCWs**

Discovery theme: Access & Flow of Information

1 INSUFFICIENT DEDICATED SCIENTIFIC KNOWLEDGE

"The first thing that comes to mind when we see a patient with high fever, is Malaria." - Doctor

"The literature about LF is not complete or precise, and mostly concerns later stages of the disease" - Doctor

Professionals working within various Healthcare units are not equally trained about LF. Although many have a general knowledge about transmission and treatment, the index of suspicion remains low.
Some do not detect LF when faced with symptoms as their unit is not specialized in infectious diseases, others lack accurate and updated scientific resources (literature on symptoms recognition and communication material on transmission). This leads to higher LF facility-based transmission, late or wrong diagnosis, higher proportions of post-treatment complications or death, and contributes to community members' lack of trust in medical care and late care-seeking.

***How might we** improve the average level of training against LF among all members of a Healthcare facility ?*

***How might we** provide a better access to recent scientific information about LF to all HCWs ?*

***How might we** ensure a quicker diagnosis of LF regardless of the Healthcare unit specialty ?*

CONNECTIONS, OPPORTUNITIES &/OR BARRIERS FOR DESIGN & TEST

The lack of knowledge among HCWs affects not only the spread but also the perception of the disease within the community. Not having clear and accurate information coming from the HCWs when there already are myths and misconceptions to fill knowledge gaps, maintains ignorance and fuels stigma.

It is also important to note that the research highlighted beliefs and stigma coming from HCWs toward LF patients (fear of contamination and of being stigmatized for caring for these patients).

Discovery theme: Access & Flow of Information

2 LACK OF INFORMATION IN THE COMMUNITY

“We hear a lot of radio spots about other health issues but less about LF. LF information is seasonal” - Doctor

"People don’t trust the radio but religious leaders and health care workers: yes."
- Religious Leader

Information about LF is not as widely diffused or trusted among community members as other diseases such as Malaria, TB or Covid. There are several contributing factors:

- A lack of general knowledge of LF caused by a limited flow of information (radio & TV programs, printed material, community discussions);
- Distrusted channels or messengers, and proper messaging (tone). What people really know and remember about LF is often what they have heard from word-of-mouth, and it is often inaccurate;
- Community leaders (Chiefs, Religious Leaders) are eager to communicate about the disease but lack training and accurate information.

This reinforces denial, affects risk perception, and sets the ground for continued stigma of affected populations and the disease.

***How might we** provide information about LF, and sustain its dissemination through trusted actors in the community?*

***How might we** unleash Community Leaders’ potential as trusted sources to guarantee the flow of accurate information within the community?*

***How might we** provide information about LF that is accessible to all (illiteracy, local language, place of dissemination)?*

CONNECTIONS, OPPORTUNITIES &/OR BARRIERS FOR DESIGN & TEST

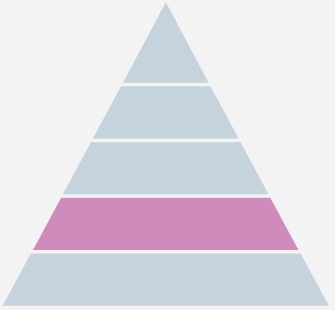
The lack of accurate information flow about LF in communities is one of the root causes of the stigma against victims of LF and misconceptions surrounding the disease. What sticks in people's minds about LF is what they heard and the stories they've been told.

On the other hand, there was a clear opportunity identified in the research, community influencers interviewed highlighted the importance of generating awareness in the community and recognized their role as trusted disseminators of information.

Discovery theme:
Beliefs & Misconceptions

Desired key behaviors :

- Conversations and shared knowledge about LF are common, breaking the taboo that surrounds the disease
- The narrative around LF is less stigmatizing of affected people and does not provoke negative hearsay
- Official communication sources are accurate, reliable and trusted by the population



Insights

3 **SHARED WRONG & NEGATIVE BELIEFS**

4 **VICIOUS CIRCLE OF STIGMATIZATION**

5 **SYSTEMIC DENIAL**

Lines of Inquiry connected to this theme

A The continued lack of awareness about LF

B Beliefs, myths & misconceptions

C Poor environmental hygiene & waste management

D Stigmatization toward affected people & caretakers

E The low index of suspicion among HCWs

Discovery theme: Beliefs & misconceptions

3 SHARED WRONG & NEGATIVE BELIEFS

"LF is seen as something bad; affecting care seeking because people do not want others to know and will seek alternative treatment instead of going to the hospital."
- Survivor & nurse

"Culture and religion will influence you but knowing the truth will help you scale through" - Survivor

The sustained spread of cultural / religious beliefs and misconceptions contribute to the stigmatization of LF and those affected by it.

The most common beliefs found among participants are:

- *"LF is a curse from witchcraft or a punishment from god for bad behavior";*
- *"Only dirty people get LF";*
- *"People in rural areas are most likely to get LF";*
- *"LF cases come from other states (no cases are local)".*

***How might we** change the narrative around LF so it becomes another well-known disease?*

***How might we** break the cycle of negative hearsay when it comes to Lassa Fever?*

CONNECTIONS, OPPORTUNITIES &/OR BARRIERS FOR DESIGN & TEST

Infected people, caregivers (family member / health professional), and survivors all experience stigma.

Not having a clear understanding of how people get LF even when they enforced preventive measures, leads people to look for less rational explanations such as a punishment from god or witchcraft, which strengthens misconceptions and stigma.

Discovery theme: Beliefs & misconceptions

4 VICIOUS CIRCLE OF STIGMATIZATION

“Right now, if there is no adequate information, stigmatization will continue to rise” - Survivor in Edo

"People raise alarm and see LF as something that is not supposed to happen to anyone, this makes many want to keep it secret."
- Nurse survivor

A cycle of misconceptions about LF runs through communities and perpetuates strong stigma around LF:

1. **The lack of accurate information on LF (causes, transmission, symptoms) gives way to hearsay and beliefs related to moral and social bias.**
2. **People with a suspected or confirmed diagnosis feel ashamed and afraid. Most keep it a secret, which delays treatment.**
3. **Not talking about LF nor sharing experiences creates a taboo based on shame and fear of communicating which, in turn, reinforces the stigmatization and isolates affected people.**

How might we *break the taboo triggered by the stigmatization of LF?*

How might we *unveil the shame surrounding LF survivors and enable them to share their experience?*

How might *we leverage lessons learned from other highly stigmatized infectious diseases to reduce or eliminate the stigma associated with LF?*

CONNECTIONS, OPPORTUNITIES &/OR BARRIERS FOR DESIGN & TEST

The moral prejudice and collective judgment on LF victims affect them on a psychological level, with depression, stress, anxiety due to isolation, social rejection and beliefs of punishment due to bad behavior.

Discovery theme: Beliefs & misconceptions

5 SYSTEMIC DENIAL

"I don't believe there is LF, because I am a hunter, I eat rats and rodents without any fear of the disease" Hunter

"I heard people around me saying government members are not sincere when announcing cases numbers, used for them to get support & aid." - Farmer

While some information about LF is disseminated through national media, people who have not been or do not know anyone who has been infected do not believe it really exists. This is due to three main factors:

- **Proximity with rats: living with rats as common rodents, pets, or delicacy affects the risk perception and leads to denial. Rats as carriers of LF is not obvious to most.**
- **Distrust in the government: community members show skepticism regarding the government's motivations behind health promotion.**
- **Stigmatization: LF is strongly believed to be a punishment for bad behavior, leading affected people to keep it a secret and health care professionals to ostracize patients.**

***How might we** break the habit of distancing LF by attributing it to other persons and places?*

***How might we** help people clearly understand how LF is transmitted, and the role rats play in this transmission?*

***How might we** build the community's trust in government health promotion?*

CONNECTIONS, OPPORTUNITIES &/OR BARRIERS FOR DESIGN & TEST

Many participants were ashamed of considering rats as pets or letting the researchers know about the fact that they ate rats, or had them around the house. They often referred to the neighbor or close family being the ones having such behaviors.

Another common belief at the origin of denial was that rats nearby houses, or in one's area, are not the rats at the origin of LF.

Discovery theme:
Risk Factors Perception

Desired key behaviors :

- All persons at risk possess a shared understanding of risk factors
- Healthcare professionals (including cleaning & maintenance staff) sustainably implement safe practices
- Community members make informed and timely care-seeking decisions

Insights

6 **PERCEPTION Vs PRACTICE**

7 **BREACHED SANITARY PROTOCOLS**

8 **FEAR OF CARE-SEEKING**

Lines of Inquiry connected to this theme

A The continued lack of awareness about LF

B Beliefs, myths & misconceptions

C Poor environmental hygiene & waste management

D Stigmatization toward affected people & caretakers

E The low index of suspicion among HCWs

Discovery theme: Perception of Risk Factors

6 PERCEPTION & PRACTICE GAP

"While she explains never leaving food remains uncovered, we could observe this not being the case." Observation of food vendor

"She mentions keeping her kitchen tidy & storing food safely but we observe food in the open & used dishes on the floor."Observation of household influencer

Most homemakers, farmers and food processors have heard about safe practices (e.g., housekeeping and cleaning, clean water usage) to maintain a rat-free environment and produce food safely. However, their perception of risks is sometimes not concrete and lacks tangibility. Certain beliefs or information sources contradict their knowledge (e. g. “LF is in other states”, and are not detailed, which prevents safe practices from being incorporated into daily activities.

Chemical treatment against rats is a popular practice, but was not always observed regularly, and constitutes a sanitary danger when used close to cooking or food processing areas.

***How might we** enable homemakers, cooks and farmers to have a clear and specific understanding of LF risk factors in their daily routine?*

***How might we** enable homemakers, cooks and farmers to differentiate between inaccurate beliefs and accurate preventive measures?*

CONNECTIONS, OPPORTUNITIES &/OR BARRIERS FOR DESIGN & TEST

Many participants were aware of the existence of LF, including elements of prevention. However, the level of awareness changed from one person to the other: perception of risk factors depended on how complete and accurate their information was, but also on the importance of contradicting hearsay, and on how concrete LF was to them (e.g. when a neighbour contracted LF).

Discovery theme: Perception of Risk Factors

7 BREACHED SANITARY PROTOCOLS

"While he mentions washing his hands before and after attending a patient during a consultation, we see he washed them only before." - Observation of a doctor

"We could observe a lot of information on PPE use and garbage separation on the lab walls, but they were not followed by the lab worker." - Observation of a testing lab

Sanitary practices and protocols within health facilities are not strictly followed. Most health care professionals have access to PPE material and sanitary guidelines / communication but do not systematically enforce these practices, increasing the risk of contaminating themselves, other staff members, patients and community members.

Main risk practices are:

- **Improper disposal of equipment and medical waste which community members can access and re-use,**
- **Incorrect or optional use of PPE equipment (masks, gloves, and other protective gear),**
- **Poor hygiene practices (hand-washing) and cleaning of facilities, made harder due to scarce access to running water.**

***How might we** ensure a shared understanding of preventative practices and risks associated to LF in health facilities ?*

***How might we** facilitate a consistent and durable change in providers' perception of safe practices ?*

***How might we** better understand the root causes behind poor PPE and hygiene practices within health facilities ?*

CONNECTIONS, OPPORTUNITIES &/OR BARRIERS FOR DESIGN & TEST

Besides the mindset and culture among HCWs and health staff, we must note that several structural issues might be contributing to this insight, such as water access, waste management system, and continued flow of PPE if using it more often.

Discovery theme: Perception of Risk Factors

8 FEAR OF CARE-SEEKING

"The service is viewed as a place of no return because people don't come back. It delays presentation of cases at the hospital." - Doctor

"I incurred so many debts for my son's LF treatment that I have not been able to pay." - Survivor's Father

Care-seeking behaviors are influenced by fear, impacting timely diagnosis and treatment. This fear is triggered by the following perceptions :

- Infectious Health Services (dedicated hospital units and testing services) are considered places of no-return
- Being diagnosed with an infectious disease means being rejected by society and isolated;
- Many fear that being treated for an infectious disease will prevent them from working and attending to their family's needs;
- Infectious Health Services are believed to be very expensive, with no cheaper alternatives.

***How might we** help community members change their perception of infectious diseases services?*

***How might we** help people with suspected LF be more afraid of the disease than its care process ?*

***How might we** help people make informed care seeking decisions based on complete information about LF treatment (including costs) ?*

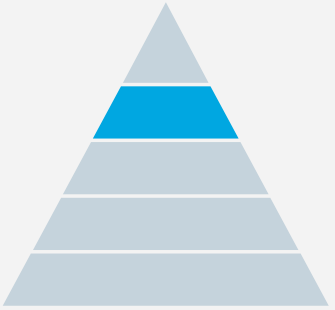
CONNECTIONS, OPPORTUNITIES &/OR BARRIERS FOR DESIGN & TEST

The discovery research did not show if the perceptions about care costs were valid, and/or if cheaper alternatives were available in each state.

Discovery theme:
Habits & Practices

Desired key behaviors :

- Food is stored and processed in a safe way, from farm to table
- Mental models about hygiene, cooking, eating and housekeeping practices are built on clear and safe guidelines
- Food processing and cooking practices are safe, and not a transmission factor



Insights

9 **UNSAFE HOUSEHOLD HABITS**

10 **UNSAFE EATING**

Lines of Inquiry connected to this theme

A **The continued lack of awareness about LF**

B Beliefs, myths & misconceptions

C **Poor environmental hygiene & waste management**

D Stigmatization toward affected people & caretakers

E The low index of suspicion among HCWs

Discovery theme: Habits & Practices

9 STRUCTURAL BARRIERS TO SAFE ROUTINES

"The kitchen walls are made of wood and with gaps between. It was observed that rats can pass through the walls to access food."
- Observer at a food venue

"She dries her gari produce on the ground, puts them in the bags and puts rat medicine around the bags to prevent the rats from coming." Observer at a farmer's place

While some risk factors are known to community members, unsafe habits persist within households and farms, as they are not structurally allowing an easy integration in routines. Main structural barriers include :

- Presence of holes in walls, windows or doors enabling rats to enter;
- Poor waste management system leading to the accumulation of objects where rats can hide and nest and to open air dump sites near houses and farms;
- Lack of built-in sealed storage to protect food at home, the farm or the shop;
- Lack of safe spaces to dry and store food away from rats;
- Lack of indoor, protected kitchen space to cook and store items;
- Rare access to running water in the cooking / food processing areas.

How might we *help community members improve or overcome the structural barriers to safe routines ?*

How might we *make preventive house maintenance practices a priority spending in the household?*

How might we *strengthen safe habits in the production of food, from farm to table ?*

CONNECTIONS, OPPORTUNITIES &/OR BARRIERS FOR DESIGN & TEST

Although unsafe habits are not new to the previously led desk research, the observation of many households, farms and food vendors environments uncovered opportunities in the structural aspect of those environments.

Addressing both the perception of risk factors in daily routines and the structural changes is key to enforce durable, safer habits.

Discovery theme: Habits & Practices

10 UNSAFE EATING HABITS

"He [a patient] got LF by eating rats, and did not know he was eating rats but bush meat" - Doctor

"They believe that if the gari is sundried, then warm water will kill the germs. They said gari will turn black in a month so the chances that it will be contaminated are not high." - Observer

When treating a LF case, HCWs and their patients are able to identify the food items at the origin of transmission. Although community members generally know about unsafe food items, they consume what they consider "delicacies" anyways :

- **Rat meat is consumed by many, and sometimes confused with other types of bush meat, considered as a delicacy;**
- **Open-air dried food (e.g. garri) is very popular while one cannot make sure that rats haven't been in contact with it.**

How might we *help people differentiate rat meat from other bush meat?*

How might we *encourage safer food alternatives that respect traditions and popular habits?*

CONNECTIONS, OPPORTUNITIES &/OR BARRIERS FOR DESIGN & TEST

Although this insight is not new to the previously led desk research, the "why" behind each of these practices needs to be found in the next steps of the activity to address this major aspect of LF's transmission.

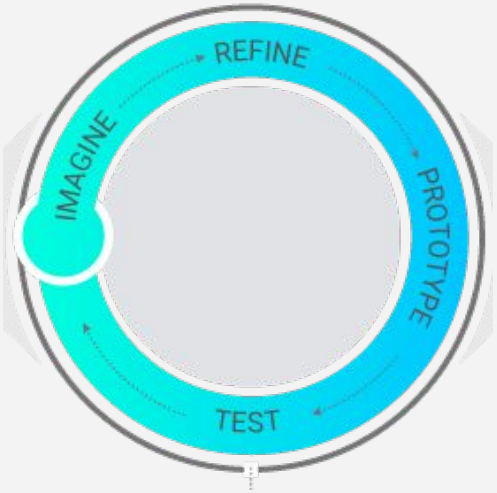
However, during this qualitative research, the root causes behind unsafe eating habits were not fully uncovered. Do people lack the access or means to alternative proteins, or does the root cause lie behind cultural habits ?

8

NEXT STEPS & LESSONS LEARNED

Next Step - Design & Test

PHASE 2 | DESIGN & TEST



The Design and Test phase builds on the opportunities and design strategy identified during the Define phase to **generate ideas and test early prototypes with target audiences**. The second phase of the SBC Flow Chart is a cyclical and iterative process that focuses on generating and refining ideas to suit a specific target audience and context.

From low fidelity to progressively higher fidelity, **prototypes were iteratively tested and refined with users**. The higher the fidelity of the prototype, the closer it was to being implemented.

This was an iterative and fast-paced process to develop and test multiple designs to address the opportunity areas. Key activities that were undertaken during the Design and Test phase are described below.

Refine

Developed the ideas into something that can be built by identifying assumptions and designing the finer details of the concept.

Prototype

Built ideas into tangible prototypes that can be taken and tested with communities.

Test

Users interacted with the prototypes and provided feedback on the idea. At this stage, some concepts were identified as undesirable, unfeasible, or inappropriate, and were discontinued.

Recommendation - Behavioral drivers model

The Behavioral Drivers Model (BDM) considers behaviors to be the complex result of the influence of multiple determinants, in a socio-ecological approach. It presents and defines concepts and suggests a representation of the relationship between the various forces that can affect behaviors.

The BDM starts by answering the fundamental question: why do people do what they do?

As a first element of response, all drivers fall into three main factors:

- **Psychology**, gathering individual cognitive and emotional drivers;

- **Sociology**, for determinants related to interactions within families, communities, groups and society at large;

- **Environment**, for structural elements such as institutions, policies, systems and services, infrastructures, information, etc.

This model will help us understand the drivers to focus on, for the Design & Test of solutions. See next page for connections.

Psychology

COGNITIVE BIASES

The information my brain is willing to consider.

2 3 4 5 6

ATTITUDE

My opinion about a behaviour; how I feel about it.

5 8 6 9 10

LIMITED RATIONALITY

The reasons why I don't do what I should.

6 8 9 10

Sociological

SOCIAL INFLUENCE

How others affect what I think, feel and do

3 4 5 9 10

Environment

COMMUNICATION ENVIRONMENT

The information and opinions I can be exposed to.

3 4 5 1 2

CONTEXT

The context in which I live (culture, traditions, beliefs).

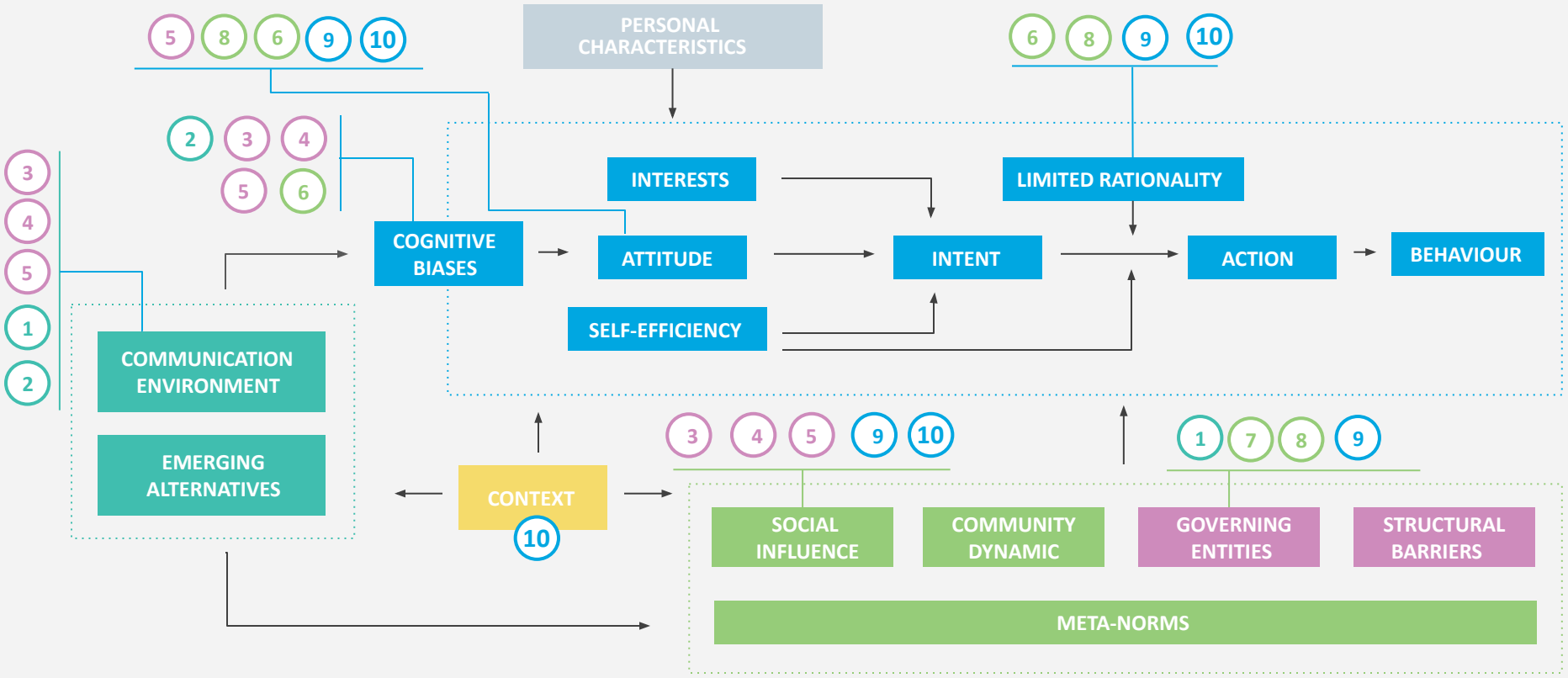
10

GOVERNING ENTITIES

How institutions influence what I do.

1 7 8 9

Recommendation - Behavioral drivers model



1 INSUFFICIENT DEDICATED SCIENTIFIC KNOWLEDGE

2 LACK OF INFORMATION IN THE COMMUNITY

3 SHARED WRONG & NEGATIVE BELIEFS

4 VICIOUS CIRCLE OF STIGMATIZATION

5 SYSTEMIC DENIAL

6 PERCEPTION VS PRACTICE

7 BREACHED SANITARY PROTOCOLS

8 FEAR OF CARE-SEEKING

9 STRUCTURAL BARRIERS TO SAFE ROUTINES

10 UNSAFE EATING HABITS

APPENDIX

Intent statement

Intent statement
The activity in one page

Objective: Identify barriers, enablers and challenges around Lassa Fever-related preventive behaviors by understanding deeply and empathetically the perspectives and motivations of affected audiences in 3 highly affected states : Benue, Edo, and Ondo.

CURRENT STATE

Where are we now ?

Activity context

Lassa Fever is a re-emerging disease of epidemic proportions in West Africa. In Nigeria, research shows that poverty is the main driving factor. Consumption of rodents, rodent-related exposures during rural farming, seasonal ecology, and poor hygiene practices are all risk factors for transmission. Trends in surveillance data show that cases remain high during the dry season from December to March, while the case fatality rate remains steady at around 20 percent. Nigeria's response to disease outbreaks is through coordination between the state and national Public Health Emergency Operations Centres (PHEOCs) that manage deployment of rapid response teams.

Through a literature review, we found that while awareness of Lassa Fever is high among community members, **knowledge about risk factors, symptoms, and perceived benefits of preventative measures is low**. Risk perception is also affected by misconceptions of the disease host and methods of transmission, which contributes to the continuation of community practices of rodent consumption and bush burning. Poverty and food insecurity are also barriers to preventive behaviors.

While ongoing Risk Communication and Community Engagement (RCCE) continues, Breakthrough ACTION will conduct a Human Centered Design (HCD) process to identify additional social and behavior change opportunities, and foster a greater collaboration with community stakeholders and other implementing partners.

Prioritized challenges

Through consultation meetings with the Nigeria Centre for Disease Control's (NCDC's) and the Lassa Fever technical working group (TWG), owing to its resurgence and the frequent nature of its outbreaks, Lassa Fever was identified as the focus priority disease for the United States Agency for International Development (USAID) Nigeria's Global Health Security Agenda (GHSA) efforts.

After consultation with key local actors, this project will target the following challenges:
- The continued lack of awareness on the disease
- Poor environmental hygiene & waste management
- Beliefs, myths and misconceptions
- Stigmatization toward affected people and caretakers
- The low index of suspicion among health care workers (HCW)

STRATEGIC SHIFTS

How do we get there ?

FROM	TO
Acknowledging that people are not aware of the symptoms and have low risk perception	Identifying actual risk factors and symptoms recognition as well as informal information channels to recommend effective communication strategies.
Identifying how people could act with the right information on risk factors and symptoms recognition	Identifying how and why people trust various - and sometimes conflicting - sources of information, and enabling them to trust the right information and act on risk factors and symptoms recognition.
Identifying which behaviors bring about high risks of transmission	Identifying which preventive measures have been most adopted and why, to create and implement new strategies fostering durable behaviors against transmission
Collecting data and investing in communication campaigns and RCCE programs to prevent Lassa Fever from reoccurring in the community.	Identifying and implementing behavior change strategies focused on identified barriers to prevention, in addition to communication campaigns and RCCE programs.
Identifying practices related to food consumption, processing and storage	Recommending safe behaviors around popular food consumption, processing and storage, while promoting safer and affordable protein alternatives

How we will proceed

This activity consists of the first phase of Breakthrough ACTION's process to develop effective Social and Behavior Change (SBC) activities: the SBC flowchart. Called "Define", this phase involves qualitative research to understand perspectives of community members regarding Lassa Fever related behaviors deeply and empathetically. This research is complementary to a desk review and allows to comprehend all facets of the design challenge in the context of 3 highly affected states in Nigeria : Ondo, Edo and Benue. This phase also assesses the findings and insights that already exist to deepen the understanding of the problem's complexity and unpack issues around intent, motivation and ambivalence. A result of this activity will be a set of new insights shared with partners, and later used to develop new solutions thanks to the second phase of this activity: "Design & Test".
Why choosing HCD for this activity? By designing services, products, and behavioral interventions that actively engage all relevant perspectives throughout the activity, and stimulate the recipients' motivations, the HCD approach allows to develop innovative solutions to complex health issues, such as Lassa Fever, in a durable way.

FUTURE STATE

How do we get there ?

Activity outcome

This activity will lead to set of insights reflecting relevant behaviors and practices that work as barriers or enablers to tackle Lassa Fever. These insights will result from mapping, researching and uncovering new perspectives from all relevant stakeholders of the Lassa Fever socio-ecological model :

Individual, family and community levels - Environmental practices, cleaning practices; food processing, storage, and consumption practices; stigmatization surrounding Lassa Fever; and risk perception, symptom identification, and prompt care-seeking.

Organizational and policy levels - Existing initiatives, campaigns, and policies on : infection and prevention control practices ;environmental practices; food processing, storage, and consumption practices: alternatives for safer and affordable protein sources; and coordination of SBC for Lassa Fever and commitment to resource mobilization.

Success factors

The **Nigeria Centre for Disease Control** will understand the root behavior causes of high-risk transmission and which stakeholders are connected to these.

The **Federal Ministry of Agriculture and Rural Development** will be able to identify and prioritize the agriculture practices most relevant to addressing LF.

The **Federal Ministry of Environment** will understand the main behaviors from individual to community level practices related to food, cleaning, and environmental practices.

State level stakeholders will understand relevant and strategic behaviors from a socio-ecological level perspective in these three states, to focus resources and coordination between key actors for specific systemic-oriented interventions.

Community leaders will understand and play supportive roles required for prevention, identification and treatment of the Lassa Fever.

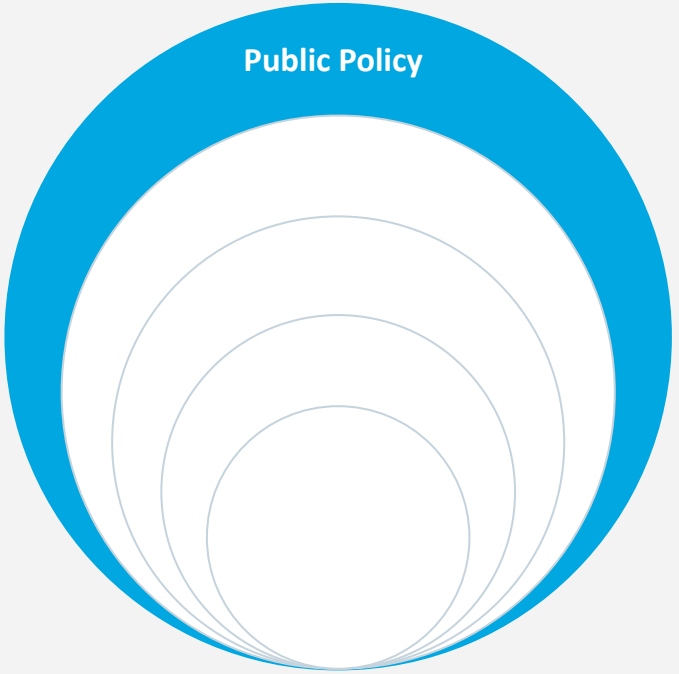
Individuals and families susceptible to be affected by LF will be better informed on preventive measures as well as on symptoms and care seeking, and adopt new behaviors related to food consumption, decreasing the rate of infections.

Design challenge

How might we identify current enablers and challenges to the spread of Lassa Fever, to develop effective preventive and informative social and behavior change interventions in most affected states ?

Timeline :

Research findings - Across the SEM



Limited (clean/running) water access

Waste management system

- Poor pick-up geographic coverage
- infrequent pick up

Lack of dedicated and detailed communication

- radio programs
- printed material

Low prevalence of LF testing centers leads to long turnaround times for test results.

Public Policy

Developing and enforcing state and local policies that can increase beneficial health behaviours.
Developing media campaigns that promote to the public, an awareness of the health need and advocacy for change

Research findings - Across the SEM

Community

Coordinating the effects of all members of a community (organisations, community leaders, and citizens) to bring about change

Beliefs and misconceptions surrounding the disease

- LF is a curse/punishment from god or witchcraft
- Dirty people get LF
- People in rural areas get LF

Stigmatization of affected people

- Fear of contagion leads to social exclusion.
- Survivors are perceived negatively (as cursed or punished for bad behavior)

Avoiding / delaying treatment

- Infectious health services are perceived as "Places of no return"
- People can't afford to skip work or care for sick family members while in isolation
- People think treatment is very expensive and that they cannot afford it
- Belief that LF is a death sentence

Denying LF's existence

- People have long lived close to rats without getting infected
- When one hasn't experienced or seen it

Collective lack of knowledge regarding LF

- Transmission
- Symptoms
- Risk factors
- Treatment

General skepticism regarding government 's motivations regarding health promotion

Research findings - Across the SEM

Organizational

Changing policies, practices and physical environment of an organisation (e.g. health care setting, workplace, community organisations) to support behaviour change

Stigmatization by/towards HCWs

- HCWs taking care of LF patients suffer from stigma
- LF patients are stigmatized by HCWs

Poor sanitary practices in health services

- PPE access/use
- Waste management (PPE)
- Poor hygiene practices at work (hand-washing, waste, cleaning..)

Households waste management attracts and feeds rats

- Open bags, bins without lids or overflowing bins/bags
- Open air waste disposal
- Waste is kept close to the house, without regular pick up

Lack of scientific knowledge among HCWs

- Confusion between LF and Malaria symptoms
- Lack of trusted resources to learn from
- Lack of risk factors information within the facility

Health workers education on LF

- Limited dedicated scientific literature
- Lack of training opportunities from MoH

Wrong diagnosis and lengthy test results delay proper treatment and enable the spread of the disease within the facility

Research findings - Across the SEM

Interpersonal

Recognising that groups provide social identity and support, interpersonal interventions target groups, such as family members or peers.

Homemakers' inaccurate perception of safe practices

- Home is perceived as tidy and rat-proof despite the presence of accumulated objects that foster rat nesting
- Uncovered food items and used dishes are not perceived as risky
- Uncovered waste bins and open field waste disposal are not perceived as risky
- Uncovered water tanks / containers are not perceived as risky

Community leaders' role in raising awareness

- Possess basic knowledge about the disease
- Lack sufficient support or knowledge/training to be LF advocates among their communities.

Farmers low perception of risk factors

- Dry food in the open air, unattended / unprotected
- Leave crop waste near the farm, attracting rats

Research findings - Across the SEM

Individual

Motivating change in individual behaviours by increasing knowledge, or influencing attitudes or challenging beliefs

Poor house maintenance enables rats access & proliferation

- Holes in walls, windows or doors enable rats to enter
- Untidiness and the accumulation of objects allow rats to hide and nest

Cooking habits attract rats & enables contamination

- Lack of safely sealed storage to protect food
- Remains of food on cookware
- Food drying in the open, unprotected
- Cooking is often done on the floor and/or outdoors

Households waste management attracts and feeds rats

- Open bags, bins without lids or overflowing bins/bags
- Open air waste disposal
- Waste is kept close to the house, without regular pick up

Eating habits and perception enabling transmission

- general appreciation of bush and rat meat
- appreciation for open-air dried food (e.g. garri)

Stigmatization effects on survivors and caretakers

- depression
- social isolation
- taboo, having to lie about being infected

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