

Section 5.6. Qualitative Research Introduction and Observational Research Guide

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Objectives: To provide principles and general guidelines for the conduct of targeted qualitative research to understand the context and potential risk practices and behaviors of individuals at high risk of zoonotic disease spillover.

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The authors assert that human surveillance activities should always occur in compliance with all applicable laws and regulations and should only be undertaken after securing all necessary permits and approvals, including ethical approvals.

For more information about the contents of this guide, please contact predict@ucdavis.edu.

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Section 5.6.1. Qualitative Research: An Introduction

Qualitative Research is an exploratory type of research that is used to gain insight into people's lives. Qualitative data can be collected at multiple levels within the community using different and complementary methods. Figure 1 shows three different levels: human environment, community life, and individuals and households. These three levels are linked to three different qualitative methods of data collection: observational research, focus groups and ethnographic interviews.

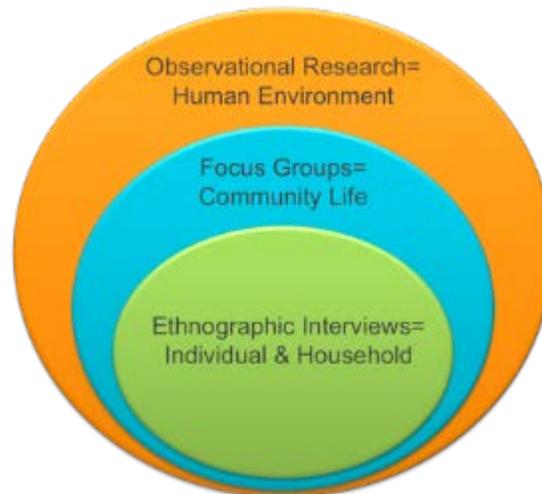


Figure 1: Levels of Qualitative Data

Qualitative research is the best method for understanding the individual motivations that influence behaviors, particularly private, unpopular or taboo behaviors. People are more likely to provide information on such behaviors if they are able to provide the context or a justification. For example, a person who would not admit to hunting in a protected area if asked in a survey may disclose hunting activities in a one-on-one ethnographic interview, offering the justification that hunting was necessary to feed the family.

Qualitative research may be general and implemented over long periods of time. Alternatively, this type of research may be targeted and focused on a set of specific issues, as is the case for PREDICT qualitative research.

The limitation of qualitative research is that findings may only apply to small groups of people who are similar to those participating in the research. While there is great depth and detail to the data collected using these methods, and much important information is learned, it cannot be said with certainty that the behaviors and practices identified in small group settings are the same as those in the larger community. That is why a qualitative approach is often combined with other types of data collection (e.g., large surveys) to address complex issues that require timely intervention.

The PREDICT project strategy is to use the data collected through the qualitative research step of the process to improve on behavioral risk questionnaires that have been conducted with large populations. The qualitative data will be analyzed based on the experiences of people who are at increased risk of zoonotic disease transmission. In addition, after the behavioral survey has been completed with a larger population, the findings from the qualitative analysis can be used to help interpret survey findings, as well as to inform risk mitigation strategies.

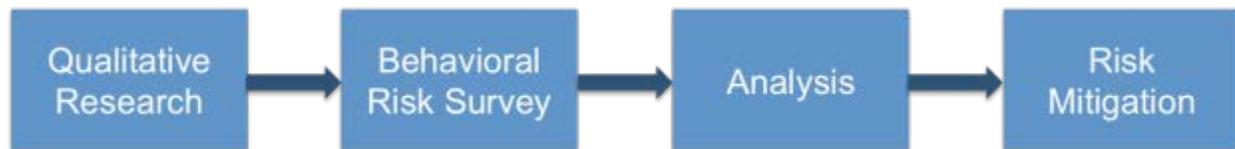


Figure 2: PREDICT project strategy

This protocol reviews the objectives and methods of conducting observational research. Observational research may be conducted immediately at a site, and can be conducted at any time. Focus groups and ethnographic interviews require institutional review board (IRB) or other in-country ethical committee approvals before they may be conducted. All staff conducting ethnographic interviews or focus groups or participating in data analysis must complete human research ethics training (e.g., Collaborative Institutional Training Initiative [CITI] training; National Institutes of Health Protecting Human Research Participants training) before working with research subjects or their identifying information.

Section 5.6.2. Targeted Approach

The qualitative methods outlined in this protocol use a targeted qualitative approach. This approach involves assessing current knowledge and perspectives of specific populations, in order to gain insight into a set of core themes.

Section 5.6.2a. Core Themes

The **core themes** are the topics that guide the research in this protocol. These are topics about which incomplete or no information is known, particularly in regard to their relationship with zoonotic disease transmission. There are five core themes that interviewers will focus on when guiding the conversation. The five core themes and the research goals for each theme are listed below. Examples of types of questions that can be asked for some of the core theme are included in the [Ethnographic Interview Guide \(Appendix 5.6.5c.\)](#) at the end of the protocol.

1. **Human Movement:** To understand how far people travel and why
2. **Socioeconomics and Daily Living:** To understand a typical day and how socioeconomic factors impact animal contact risk
3. **Biosecurity in Human Environments:** To understand how sanitation or hygiene factors could play a role in disease transmission
4. **Illness, Medical Care/Treatment and Death of Humans:** To identify any unusual disease experiences—signs, symptoms and sources—as well as how people respond to illness
5. **Human-Animal Contact:** To understand 1) physical interactions and exposure to animals, 2) the use of animals and animal byproducts, and 3) knowledge and beliefs about animals

Section 5.6.2b. Timeline

Table 1: Timeline for Behavioral Research Activities

Method	Timeline
Observational Research	Can occur as soon as PREDICT staff are at a site at any time/place.
Focus Groups	4-8 weeks total (can occur concurrently with Observational Research and Ethnographic Interviews)
Ethnographic Research	4-8 weeks total (can occur concurrently with Observational Research and Ethnographic Interviews)

Section 5.6.2c. Target Population

The **target population** is the group of people who are actively exposed to animals along one of the PREDICT project pathways: 1) land use conversion, 2) animal production intensification, or 3) animal value chain.

Different kinds of people will be found in the three PREDICT project pathways. For example, the kinds of people that may be found on the land use change pathway could include extractive industry workers (e.g., the people who cut down and carry logs out of the forest), the foreman at a mine, engineers working at a new port or roadway being built, or the people who sell animals or other food to the workers. Below is a list of some of the kinds of people that may be found on the project pathways. There are others not included on this list.

Table 2: Examples of Members of Targeted Populations for each of the three Pathways

Land Use Conversion	Animal Production Intensification	Animal Value Chain
<ul style="list-style-type: none"> • Laborers • Foremen/headman on site • Family members of laborers • Local food suppliers (e.g. local or informal restaurants for workers) • Transporters • Residents near changing land • Fuel/wood harvesters • Farmers • Pastoralists • Miners/loggers 	<ul style="list-style-type: none"> • Farm or ranch owner • Farm or ranch worker • Backyard animal raiser • Distributors • Transporters • District vets • Feed/supplement sales people • Abattoir workers • Butchers • Traders • Herders 	<ul style="list-style-type: none"> • Wildlife farmers • Market vendors • Wildlife restaurant owners/worker • Transporters • Users of animal based medicine • Healers/traditional medicine • Hunters • Consumers • Marketplace owners/managers

It is important to interview a diverse group of people from the target population; therefore, approximately 35-40% of participants should be women. Efforts should be made to include a large variety of people, including those of different religions or ethnicities, younger people and older people, and people who have more power or influence (e.g., farm owners), as well as those with less (e.g., market cleaners). All of these different groups of people are likely to have different risk behaviors, practices and experiences. An important goal is to be able to understand and report on as wide a range of experiences as possible.

There are no strict rules concerning sample size or how many people need to be interviewed in targeted qualitative research. The most important factor is diversity of the people interviewed. The goal of this type of research is to get many different perspectives on a limited set of core themes. The lists above have approximately 10 different kinds of people that can be found on the project pathways. Each individual type of person may differ by age, gender, ethnicity, social status, or place of birth. These types of differences should be represented in the final sample. Researchers who have considered sample size issues suggest a range of 20-30 participants per site.

Section 5.6.3. Observational Research

Purpose: Observational Research is intended to be the first step in the research process and is carried out in order to observe the setting and the people who may meet the targeted population criteria at the sites that are being considered for surveillance and sampling.

Section 5.6.3a. Observational Research Overview

Table 1: Observational research key points

What Is It?	Research Goals
<ul style="list-style-type: none"> • A first step in the qualitative research process • Passive observation and field note taking of the structure and characteristics of the site and the people who inhabit it • Informal conversations with ‘key informants’ • Mapping of land and community 	<ul style="list-style-type: none"> • Identify key informants • Establish relationships with individuals from target populations and key informants • Prepare for next stages of qualitative work (i.e. focus groups and ethnographic interviews) • Write up field notes of observed environment and interactions • Map the setting

Section 5.6.3b. Who is Involved in Observational Research

The main individuals involved in observational research are the **Observer, Key Informants** and any other individuals interested in speaking with the Observer in an informal way.

Observer: The Observer is the person conducting the observational research (e.g., can be country coordinator, head field worker, or any other PREDICT staff person). The Observer should let people know about the study and the things we would like to learn. This is an excellent opportunity to engage people and to spread the word about the PREDICT project. The Observer should pursue informal and active introductions to people and members of the target communities, especially people of influence. Identification of formal leadership structures will be important in terms of identifying opportunities and challenges for the implementation of the study, as well as any future interventions targeting structural or behavior change.

The Observer is often introduced to people of influence by local contacts that have already been established. This is the easiest way to identify key informants who may then introduce the Observer to others. It is much more challenging to engage in informal conversations without local contacts, but not impossible. Simple observation of the setting should provide clues to identify the people in authority or who have influence. This observed information is just as important and should be collected independently of any informal conversation by the Observer.

Key Informant: To gather information rapidly on a particular topic, such as the locations, practices and activities of the target population, it is necessary to identify people of power in the community (e.g., government officials, business people) or those with influence with the target population (e.g., religious leaders, market managers, community elders). Key informants are often those who are easy to approach. It is important to speak with a range of key informants.

Section 5.6.3c. Observational Research Methods

Observational Research methods include making observations, having informal conversations with community members who are willing to speak with the Observer, and mapping the sites being considered for future surveillance and sampling. Informal conversations must be limited to casual or introductory conversations about what PREDICT is doing in the community and cannot involve direct questions about the Informant or community member's work or personal life, as in-depth discussions that reveal dynamics that we are trying to understand about zoonotic disease transmission would be considered 'Human Subjects research' and would require the completion of a Participant Consent form according to PREDICT's human research ethics review board approvals.

Informal conversations often provide a good opportunity to inquire about other key informants: for example, "Is there a market manager whom I might talk to and can you direct me to her?" or "Is there a site foreman and where is his office?" All observation and informal conversations must be documented as Field Notes.

Field Notes (i.e. the data collected in Observational Research), can help contextualize subsequent qualitative or quantitative findings. Observational research can be conducted independently by the Observer or with the help of key informants, who guide the observational experience through their intimate knowledge of the area and culture. Excerpts from Field Notes are included in [Section 5.6.4. Appendix I. Observational Field Notes Excerpts](#).

The observational process entails looking for specific features of a potential research site, meeting people, talking with anyone who is interested, identifying individuals in positions of authority or influence in the target community or those who interact regularly with the target community, and trying to establish relationships with these individuals. Observation is an active activity, requiring focused attention to one's surroundings and involving all five of the human senses, including visual, auditory or olfactory information.

In addition, drawing maps of potential surveillance and sampling sites is an important and visual way to document the human environment. For example, an important feature in a market may include the separation of livestock and wildlife in different sections of the market. Hand-drawn maps can serve as reminders of where specific features are located or, over time, if these features change. Examples of maps are included in [Section 5.6.5. Appendix II. Observational Map Examples](#).

Observational research should continue through the life of the project. Observational research does not require IRB approval.

Section 5.6.4. Appendix I. Observation Field Notes Excerpts

Brief Summary

Observer: Jim Desmond
Date: Sunday, November 2, 2014
Setting: Guangzhou TaiPing Market (SARS market)
Weather: Overcast and comfortable weather
Time: 10:30am – 12:30pm

Tai Ping market is about 100 km southwest of GaungZhou. I had previously visited this market with GuangJian and Jin Ping in 2011. At that time there were many more animals, both domestic and wild, at this market.

The market is quite large, covering a large area. On this particular many of the stalls were closed and there didn't seem to be a lot of activity, not many buyers. The market is divided into two sections. There is a section that contains, reptiles, amphibians, fish and other aquatic animals. The other section contains birds and mammals. We focused solely on the bird and mammal section.

There were approximately 50 vendors – but that is a very rough estimate and it's also difficult to say if some of the closed shops were only closed that day or if they were closed permanently. Of the vendors that were open they generally seemed to sell either birds or mammals but not both. With birds, there was more mixing with vendors selling a variety of chicken, goose and duck breeds as well as pigeons. Some vendors had pheasant or quail. Some of the duck breeds looked like wild birds, for example there were a lot of mallards and there were other ducks that I could not identify the species but they did not look like domestic ducks. My guess is they are farmed but at some point in the past they had been wild caught. There was a roughly and equal number of bird vendors vs. mammal vendors

We observed a wide variety of mammals, a mixture of wild and domestic. However, there were far fewer mammals present and much less diversity than our previous visit in 2011. GJ said that the market had been shut down several months following our visit due to an article published in the paper regarding the illegal wild animal market. All the vendors are aware of the risk of disease. GJ said he overheard some guys talking when we got out of the car and they assumed we were looking for diseases in the animals. The presence of westerners definitely is a red flag for them and maybe even the presence of non-local Chinese. Unless you speak the local dialect, vendors there will be unwilling to speak with you according GJ.

Here is a list of some of the animals seen: wild boar, bamboo rats, another species of wild rat, nutria, raccoon dogs, another type of wild rodent? That looked a bit like a marmot - need to look it up, domestic cats, domestic dogs, goats, cows (jerseys). I may be missing a few but that covers most of it. The raccoon dogs were sort of hidden so they vendors must be concerned about them being seen. There were a lot more wild boar than the last visit but less animals and less diversity overall.

Observer: Arif
Setting: DLS in Dhaka
Dates: Jan 21-28, 2015

I spoke with some persons of DLS and also discussed with cattle traders in Dhaka city market regarding cattle marketing channel across Bangladesh. I visited three cattle Markets in Dhaka for getting information where the cattle come from.

The vast illegal trade thrives since cows are considered holy in India, and New Delhi is unable to legalize their export. It becomes 'legal' when traders pay up revenue officials in Bangladesh

They told that cattle come through Jessore border. Putkhali Khatal in Benapole border in Jessore district where is most of cattle trading occur.

Bangladesh and India share a 4,096-kilometer (2,545-mile)-long international border consisting 28 districts. Cattle traders say that cattle trading is occur in following districts:

Dinajpur, Kurigram, Lalmonirhat, Panchagarh, Thakurgaon, Meherpur, Kushtia, Chuadanga, Jhenaidah, Rajshahi, Chapainawabganj, Naogaon, Nilphamari and Jessore District

Above mentioned districts, Many cattle come across Meherpur border. Although, it is small district only 716 sq km but most are bordered with India. Cattle trader say that even Beef illegally come through Meherpur border. After slaughtering cattle at night, the beef come across border.

I tend to think that we can choose Meherpur district in Y-1 and Jessore in Y-2.

Near to Nepal border: Thakurgaon & Panchagarh District: there is Banglabandha, a major inland port in northern Bangladesh established to provide a trade link with India, Nepal and Bhutan. The three nations are separated by 52 km only. So either Thakurgaon or Panchagarh District can be choose for Y-3/Y-4 PREDICT-2

Myanmar border: Bangladesh and Myanmar share a 193 kilometer crossing Cox's Bazar (in Teknaf Upazila) and Bandarban District. We can choose some sites with Myanmar border

It seems to me that it will be really good to include Medical doctors of One health scholar for conducting observational research under my supervision.

Finally, the present political situation is not good here. The indefinite transport blockade is still going on.

Observer: Maureen Miller
Date: 1/7/15 Wed morning 8:30 start 11:30a end
Setting: Live animal markets in Queens, New York City
Weather: frigid it snowed last night

Site 1: Almadina Halal poultry shop
Time: 9-9:30

We got lost trying to find the place and got directions from a man coming off the subway. We had to walk through a tunnel and ended up at a cross roads of abandoned looking warehouses. He sent us off in one direction while we walked in another. There were metal shops, glass works and car buyers/repairers/parts shops strewn throughout. There was one section on the opposite side of the street where houses had been converted into 3 or 4 different kinds of church congregations. Nobody was walking on the streets. The sidewalks were unshoveled, some were icy where people had walked.

We started looking for 157th street where the poultry shop we were going to was located. We ended up bumping into the guy who gave us directions at 156th. He was a guard at the blocked off street that led into a factory complex. It turns out that the complex was a distributor of live and butchered animals. We asked another guard for directions. I showed him the address. It was pretty clear that none of these guys knew how to read. I asked about the live poultry shop and he sent us back to exactly where we had come from. One of the abandoned looking buildings was actually Another shop—not the one we had targeted.

There were two delivery trucks out front advertising halal butchered goat and cow. There was also a food cart with a long line of poultry shop workers. The cart looked like regular halal, but most of the workers were buying cup-o-soup by lipton or coffee. As we stepped on the curve, we stepped over a large frozen puddle of blood. There was also quite a bit of feces around.

I went in and asked for Raja—the name of the man I had spoked with. The first guy didn't speak English. The guy behind the clear plastic ribbon protected cutout in the wall directed me to the door next door, which was for employees only. I went in and asked several people for Raja. One finally spoke English and corrected me: Raya. The room was small high ceilinged and dark. There were plastic crates about 8" high filled with chickens that could not stand up: one had 3 chickens but most had 6 or more. There was liquid deep on the floor: a combo of melting snow, urine and feces. The air was fetid, warm and difficult to breathe.

Raya came out. I explained who I was and what we wanted to do. He said he had never spoken to me. I asked if we could observe anyway. He said no, but gave me detailed directions to the shop we were trying to go to. There were many men working there and I saw one woman. I think they were Pakistani.

People were eating and drinking in with the animals and presumably the butchery and slaughter areas too.

Section 5.6.5. Appendix II. Observational Map Examples

Brief Summary

In the market sketches the clustering of vegetables (v) and staples (s) away from live animals (LD/LW) and meat (DD/DD) was considered a market implementing minimal zoning. Picture 1 is an example of a market that did not display minimal zoning as live wild animals (LW), live domestic animals (LD), vegetables (V), and domestic meat (DD) are scattered throughout the market. Picture 2 is a market with zoning – the vegetables (V) and staples (s) are kept separate from the animals and meat. Even the live animals (LW/LD) are kept separate from the animal meat (DD/DW).

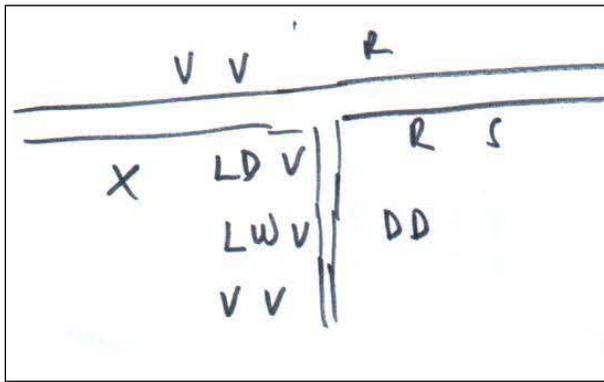


Figure 1: Market without zoning

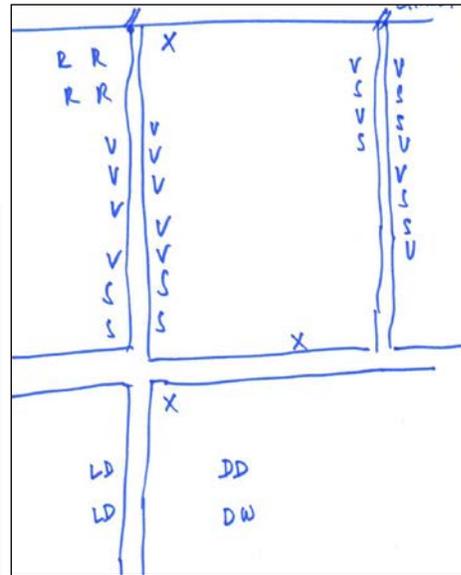


Figure 1: Market with zoning