



HEALTH EXTENSION SERVICE

NTQF Level -III

Learning Guide -9

Unit of Competence: -	Collect, Maintain and Utilize Community Health Data
Module Title: -	Collecting, Maintaining and Utilizing Community Health Data
LG Code:	H LT HES3 M03 LO8
TTLM Code:	HLT HES3 M03 TTLM 0919V1

LO1. Plan and prepare the necessary resources for data collection



This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics –

- Definition of terms
- Plan and prepare for data collection

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, **you will be able to –**

- prepare questionnaire
- Pretest, modify and amend questionnaire
- Train necessary personnel on data collection procedures
- Identify the necessary equipment/materials to execute data collection
- Inform Members of community about data collection dates and time
- Invite community leaders to support data collection process

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described below 3 to 6.
3. Read the information written in the information “Sheet 1, Sheet 2, Sheet 3 and Sheet 4,---” **in page ---, ---, --- and ---** respectively.
4. Accomplish the “Self-check 1, Self-check t 2, Self-check 3 and Self-check 4” ,---” **in page ---, ---, --- and ---** respectively
5. If you earned a satisfactory evaluation from the “Self-check” proceed to “Operation Sheet 1, Operation Sheet 2 and Operation Sheet 3 ” **in page ---.**
6. Do the “LAP test” **in page – ---**



Information Sheet-1	Definitions of terms
----------------------------	-----------------------------

1.1. Definition of data and information

Terms like data, information and knowledge are often used interchangeably in common speech. Each of these terms however, has a quite precise and distinct definition in the information sciences .Data consists of facts. Facts are observations or measurements about the world. For example, ‘today is Sunday’, ‘the patient’s blood pressure is 125/70mmHg’ or ‘Aspirin is a NSAID’

Information: Information is processed data of meaningful value, enabling a decision to be taken. Take our previous example, the number 42, when we realize that it is the temperature reading of a patient in degree Celsius, we have some information about the status of the patient’s health. By the way, this patient’s temperature is much higher than the average, which indicates danger and request for action. This information then enables a decision to be taken about the patient.

Health information includes information gathered on individuals from their birth to their death and can range from the individual patient record to aggregate data on a patient population that can span the whole world. Data typically collected and processed into health information include:

1.2. Types of health care data

1 Clinical data – most common type of health information – signs, symptoms, diagnoses, impressions, treatments, and outcome of the care process.

2 Epidemiological data – used to describe health related issues – such as disease trends and events, used to inform the public and to generate action.

3 Demographic data – statistical information about a population – age, place of residence, gender, and so on.

4 Financial data – data about payments, salaries, wages, and other money related aspects of care and treatment.

5 Research data – collected as part of care and used in research for generating knowledge about health related areas, such as in clinical trials.

6 Reference data – collected and maintained by health institutions for use in the system, including formulary for pharmacists, care-plan for nurses, protocols, clinical alerts and reminders.

7 Coded data – data that have been translated into standard nomenclature of

Health Extension Service Level III	Vision :01 Sep. 2019:	Page 3 of 24
	Copyright Info/Author: Federal TVET Agency	



classification so that they can be aggregated, analyzed, and compared .

1.3. Importance of Data

a. Importance of Data management and record-keeping:

They form the essential basis of monitoring, implementation and evaluation. They safeguard against violations of rights. Process and outcomes of diversion and alternatives must be clearly documented to ensure transparency, accountability and follow-up where necessary. Systematization and clear documentation of policies and procedures are essential to draw clear lessons from programmes and facilitate scaling-up or replication. Quality data collection for diversion and alternatives programmes can help to stimulate / improve the collection of reliable statistical data for the child justice system as a whole.

b. Importance for Monitoring purpose:

Ongoing monitoring is essential to ensure the efficient and effective running of a project or programme. It ensures progress towards goals. It is necessary to ensure that a project or programme is held accountable to its beneficiaries and donors (including tax payers if funded from public sources). It helps to identify problems from an early stage and intervene in a timely manner to resolve them which can result in time and cost savings. If done well it can contribute positively to team morale and foster an atmosphere of transparency and professionalism. It can build public and political support for a programme and answer stakeholders' questions. Periodic evaluations cannot take the place of ongoing monitoring, although records kept from monitoring processes can and should feed into evaluations.



Self-Check -1	True false question
----------------------	----------------------------

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Data and information are always the same
2. Facts like 'today is Sunday', 'the patient's blood pressure is 125/70mmHg' or 'Aspirin is a NSAID' are health information
3. Data alone enables a decision to be taken about the patient.
4. Data that describe health related issues – such as disease trends and events, used to inform the public and to generate action is called as Clinical data
5. monitoring and evaluation activities cannot be undertaken with out data



Note: Satisfactory rating - 3 points

Unsatisfactory - below 3 points

Answer Sheet

Name: _____

Date: _____

Score = _____

Rating: _____

Short Answer Questions

1. _____
2. _____
3. _____
4. _____
5. _____



Information Sheet-2	Plan for data collection
----------------------------	--------------------------

2.1. Introduction to data collection

Data collection is the process of gathering and measuring information on targeted variables in an established system, which then enables one to answer relevant questions and evaluate outcomes.

The fundamental concepts of data collection deals with the data collection methods such as observation, interviews, data collection tools and common problems in data collection addressed in the statistical data collection process. Data collection is a crucial part in the planning and implementation process. If the data collection has been superficial, biased or incomplete, data analysis becomes difficult, and the report will be of poor quality.

A formal data collection process is necessary as it ensures that the data gathered are both defined and accurate. This way, subsequent decisions based on arguments embodied in the findings are made using valid data. The process provides both a baseline from which to measure and in certain cases an indication of what to improve.

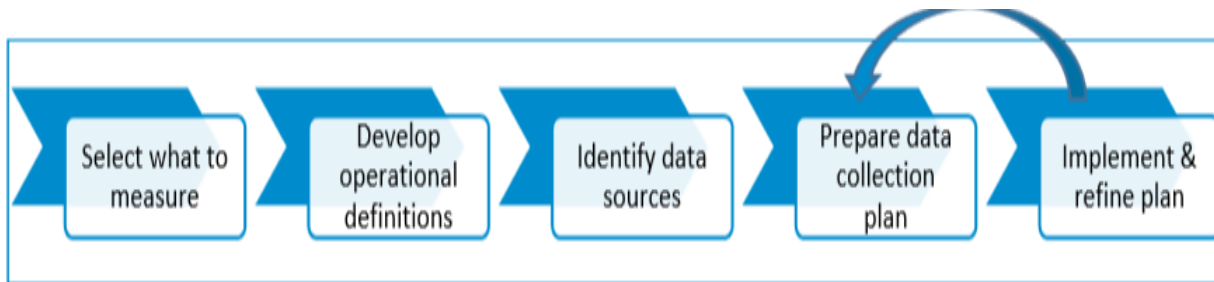


Figure 1. Data collection process.

2.2. Plan for data collection

A data collection plan helps to ensure that data collected during an analysis or improvement project is useful and appropriately collected. Proper data collection should involve a systematic approach to identify the data to be collected, plan how the data will be collected, collect the data and revise when needed.

2.3. Steps of Planning for Data Collection

- a. Select what to measure:

In selecting what to measure, focus on the key questions you are trying to answer or the key issues you are trying to resolve.

Health Extension Service Level III	Vision :01 Sep. 2019:	Page 7 of 24
	Copyright Info/Author: Federal TVET Agency	



- What are the established measures of performance for the process?
- How do you know if the process is successful?
- Do you have any service level agreements (SLA's) for the process, and if so, how are those evaluated?
- Ideally, all metrics identified on the project charter would be Included in this plan, as would any supporting metrics for those identified.

b. Develop operational definitions:

Develop a common definition for the metric to be evaluated, being specific about items to be measured

and any conditions that need to be applied to the plan. The definition must be agreed upon by everyone involved in the collection of data and should be tested prior to the implementation of the plan.

c. Identify data sources:

Identify the data sources that will be used for the collection of the data or that contain historical performance data. Historical performance data could provide the most insight, if the process has been stable and the operational definitions fit what is stored. Collecting new data can be more accurate for the current state, but requires significant time and possibly causes disruptions to current processing. Make note of where the data will be sourced and if collecting new data, how it will be collected and by whom. If needed, create a Data Collection Form to assist in the collection of data.

d. Prepare data collection plan:

Document the plan for collecting the data identified using a Data Collection Plan. Identify the following information for each metric: name, operational definition, data source, collection method, and owner.

e. Implement & refine plan:

Execute the plan. Ideally start with a small pilot test of the plan and then review and revise as needed.

2.4. Developing data collection plan

First write down a statement of your question. Keep it simple; Pay attention to both quantitative and qualitative data; Schedule time to organize data; discuss the data with "critical friends"; and seek technical assistance.

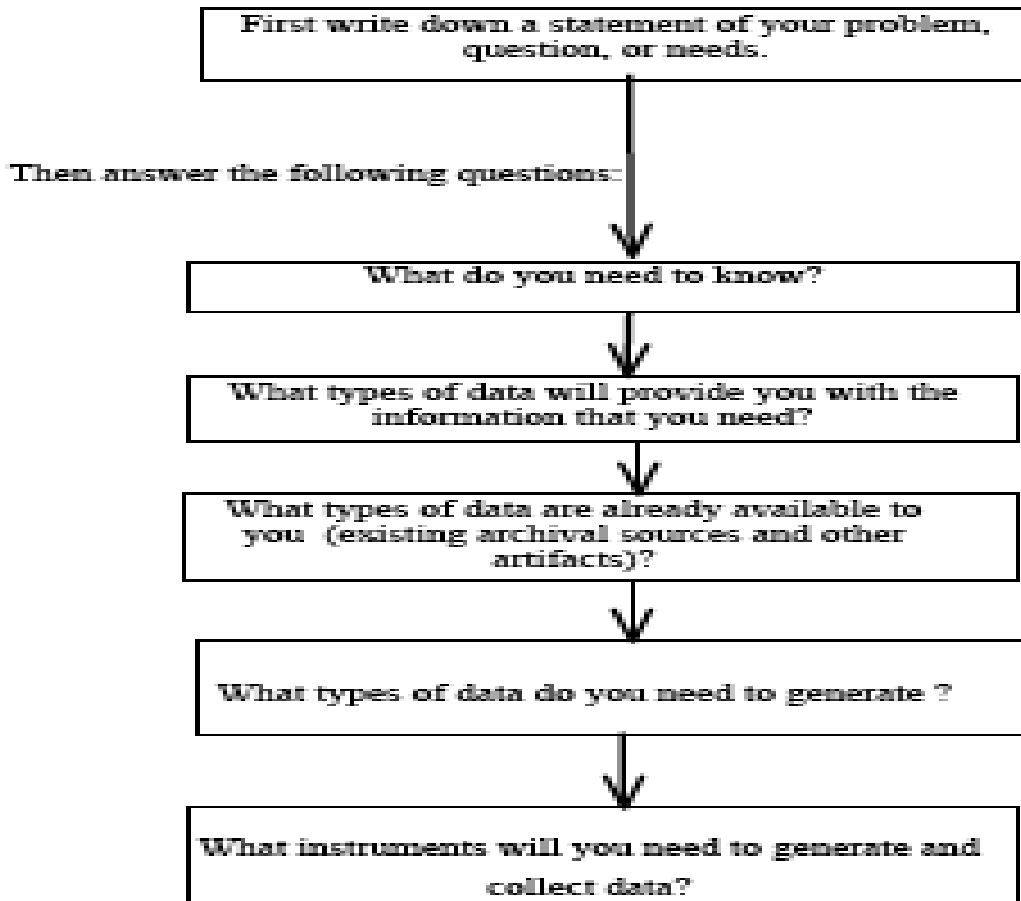


Figure 2 showing Steps of planning data collection

2.5. Questionnaire as a data collection tool

Questionnaires are also forms in which set of questions =is used; Very often they are several pages and can contain tables, plain questions and spaces where respondents or people being asked questions are filling in their in responses. (This is considered gathering primary data). The use of questionnaires is the most common method of obtaining a structured set of data and is frequently used in surveys and other research designs.

2.5.1. Questionnaires may be classified as:

- i. Structured/standardized questionnaire:

When those definite, concrete and preordained questions with additional questions are limited to clarification of inadequate response or to elicit more detailed responses

- ii. Unstructured questionnaire:



When the respondent is given the opportunity to answer in his/her own terms and frame of reference (often generates qualitative data such as opinions, themes, and feelings).

2.6. Types of Questions

Developing questions for a questionnaire can be difficult and time consuming. Care must be taken in developing the questions to be asked. Should questions be open-ended or closed ended?

a. Open-ended questions

Open-ended questions permit free responses that should be recorded in the respondent's own words. The respondent is not given any possible answers to choose from. Such questions are useful to obtain information on:

- Facts with which the researcher is not very familiar
- Opinions, attitudes, and suggestions of informants
- Sensitive issues.

For example:

- "Can you describe exactly what the traditional birth attendant did when your labor started?" -"What do you think are the reasons for a high drop-out rate of village health committee members?"

-"What would you do if you noticed that your daughter (school girl) had a sexual relationship with a teacher?"

b. Closed ended Questions

Closed questions offer a list of possible options or answers from which the respondents must choose. When designing closed questions one should try to:

- Offer a list of options that are exhaustive and mutually exclusive
- Keep the number of options as few as possible. Closed questions are useful if the range of possible responses is known.

2.7. Requirements of questionnaires

- Open format questions that are without a predetermined set of responses.
- Closed format questions that take the form of a multiple-choice question
- Writing the Questionnaire, points to be considered when writing
- Clarity (question has the same meaning for all respondents)
- Phrasing (short and simple sentences, only one piece of information at a time, avoid negatives if possible, ask precise questions, in line with respondent level of knowledge...)
- Sensitive question: avoid questions that could be embarrassing to respondents.

2.8. Questionnaire pilot testing

- The major challenge in questionnaire design is to make it clear to all respondents.
- In-order to identify and solve the confusing points, we need to pre-test the

Health Extension Service Level III	Vision :01 Sep. 2019: Copyright Info/Author: Federal TVET Agency	Page 10 of 24
------------------------------------	---	---------------



- questionnaire.
- During the pilot trial: the questionnaire participants should be randomly selected from the study population.

**Self-Check -2****True false question**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. The goal for all data collection is to capture quality evidence
2. A data collection plan helps to ensure that data collected during an analysis or improvement project is useful and appropriately collected
3. A formal data collection process is not necessary in health care operation necessary
4. Identifying data sources is not parts of data collection process
5. In developing data collection plan it is important to keep statement of your question as simple as possible
6. forms in which set of questions is used called as questionnaires
7. The use of questionnaires is not the most common method of obtaining a structured set of data and is frequently used in surveys and other research designs.
8. Unstructured questionnaires are standardized one
9. When designing closed questions one should try to Offer a list of options that are exhaustive and mutually exclusive
10. The major challenge in questionnaire design is to make it clear to all respondents



Note: Satisfactory rating - 3 points

Unsatisfactory - below 3 points

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____



Information Sheet-3	Preparation for data collection
----------------------------	--

3.1. Training personnel on data collect

Supervisors, team leaders, measurers and interviewers should receive different training, tailored to their roles in the data collection. One extra day of training on mobile technology is highly recommended for those team members who will be responsible for mobile data collection. During the extra training day the following must be covered:

a. TRAINING ON SMARTPHONE/TABLET BASED DATA COLLECTION

- Use of the Smartphone in general
- The questionnaires, including enough time to practice by going through, filling in and familiarizing themselves with the questionnaires on the phones
- The team leader or another highly competent team member is responsible for handling the phones and administering the questionnaires. One way to simplify the data collection process when all SENS modules are included in the survey is to have the team leader conducting the individual questionnaires on one phone, and another interviewer conducting the household questionnaires on a separate phone.
- The questionnaires are filled out one question at a time. Each question has its own screen, and the user can swipe from Question 1 to Question 2 to Question 3, etc., typing in responses as they are offered. Data is saved directly on the phone with a file name that easily identifies the respondent and the household.
- In addition to entering all measurements and interview answers into the Smartphone's, the survey teams should also record all anthropometric and hemoglobin measurements taken on children and women on a paper form. This serves as a back-up in case electronic data is accidentally erased.
- During data collection the phones should be in flight mode and not connected to any network. This will ensure the phone battery to last for the duration of a day's data collection. External USB batteries are available if needed. However, every night the survey coordinator needs to remember to recharge all the phones.
- In some settings you might be interested in collecting GPS coordinates during data collection, and since the phones have integrated GPS this can be turned on and explored when desired.

Health Extension Service Level III	Vision :01 Sep. 2019:	Page 14 of 24
	Copyright Info/Author: Federal TVET Agency	



<https://youtu.be/v-6xXTTZjY>

b. Training The Interviewers on Manual Data Collection

Here Are Some of the Major Topics That Should Be Included In Interviewer Training –

- Describe the entire study:

Interviewers need to know more than simply how to conduct the interview itself. They should learn about the background for the study, previous work that has been done, and why the study is important.

- State who is sponsor of research:

Interviewers need to know who they are working for. They and their respondents have a right to know not just what agency or company is conducting the research, but also, who is paying for the research.

- Teach enough about survey research:

While you seldom have the time to teach a full course on survey research methods, the interviewers need to know enough that they respect the survey method and are motivated. Sometimes it may not be apparent why a question or set of questions was asked in a particular way. The interviewers will need to understand the rationale for how the instrument was constructed.

- Explain the sampling logic and process:

Naive interviewers may not understand why sampling is so important. They may wonder why you go through all the difficulties of selecting the sample so carefully. You will have to explain that sampling is the basis for the conclusions that will be reached and for the degree to which your study will be useful.

- Explain interviewer bias:

Interviewers need to know the many ways that they can inadvertently bias the results. And, they need to understand why it is important that they not bias the study. This is especially a problem when you are investigating political or moral issues on which people have strongly held convictions. While the interviewer may think they are doing well for society by slanting results in favor of what they believe, they need to recognize that doing so could jeopardize the entire study in the eyes of others.

- 'Walk through' the Interview:

Health Extension Service Level III	Vision :01 Sep. 2019: Copyright Info/Author: Federal TVET Agency	Page 15 of 24
------------------------------------	---	---------------



When you first introduce the interview, it's a good idea to walk through the entire protocol so the interviewers can get an idea of the various parts or phases and how they interrelate.

- Reading maps:

It's astonishing how many adults don't know how to follow directions on a map. In personal interviews, the interviewer may need to locate respondents who are spread over a wide geographic area. And, they often have to navigate by night (respondents tend to be most available in evening hours) in neighborhoods they're not familiar with. Teaching basic map reading skills and confirming that the interviewers can follow maps is essential.

- Identifying households:

In many studies it is impossible in advance to say whether every sample household meets the sampling requirements for the study. In your study, you may want to interview only people who live in single family homes. It may be impossible to distinguish townhouses and apartment buildings in your sampling frame. The interviewer must know how to identify the appropriate target household.

- Identify respondents:

Just as with households, many studies require respondents who meet specific criteria. The interviewer may have to ask a series of filtering questions before determining whether the respondent meets the sampling needs.

- Rehearse interview:

You should probably have several rehearsal sessions with the interviewer team. You might even videotape rehearsal interviews to discuss how the trainees responded in difficult situations. The interviewers should be very familiar with the entire interview before ever facing a respondent.

- Explain scheduling:

The interviewers have to understand the demands being made on their schedules and why these are important to the study. In some studies it will be imperative to conduct the entire set of interviews within a certain time period. In most studies, it's important to



have the interviewers available when it's convenient for the respondents, not necessarily the interviewer.

- Interviewer's Kit:

It's important that interviewers have all of the materials they need to do a professional job. Usually, you will want to assemble an interviewer kit that can be easily carried and includes all of the important materials such as

1. A 'professional-looking' notebook (this might even have the logo of the company or organization conducting the interviews);
2. maps;
3. Sufficient copies of the survey instrument;
4. Official identification (preferable a picture ID);
5. A cover letter from the Principal Investigator or Sponsor; and
6. A phone number the respondent can call to verify the interviewer's authenticity.

3.2. Necessary equipment/material for data collection

What very important in the preparation for data collection is preparing information materials and tools for data collectors and area supervisors. Data collectors will need to bring the following tools and information with them on each day of data collection:

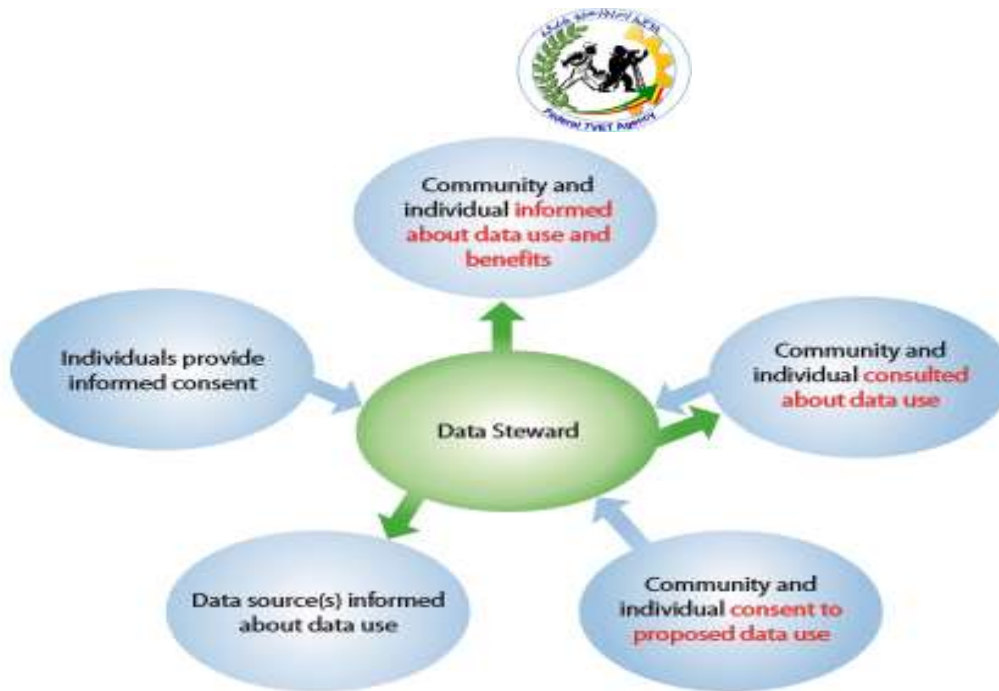
- A list of data collection teams and contact information
- Their area supervisor's contact details, including a mobile phone number to call in case of difficulty in the field
- A schedule of visits to survey sites
- The contact details of the sites to be visited
- Details of back-up facilities to be visited if scheduled visits are not possible

3.3. Informing member of community about data collection

Openness, transparency, and choice promote trust among data users, data sources, individuals, and communities. If data users are not open and transparent or if they do not offer choices to individuals and communities when required or appropriate, this can create unwelcome surprises, destroy trust, and may even reduce the ability to use health data to improve health in the future.

Community engagement supports openness, transparency, and choice. For example, community leaders, neighbors, or advisory boards can serve as conduits for notice to community members. Communities can also provide information to data users about how community members view the data use, the level of disclosure, and the range of choices necessary to maintain the community's trust, as depicted in the following diagram. Notice and consent are at the heart of openness, transparency, and choice.

Health Extension Service Level III	Vision :01 Sep. 2019: Copyright Info/Author: Federal TVET Agency	Page 17 of 24
------------------------------------	---	---------------



Community engagement alone may not, however, be enough to ensure openness, transparency, and choice in cases where individuals' preferences are not the same as the interests of the community.

To maintain trust, data users must be open about expectations of data use. **Notice** and **consent** are at the heart of openness, transparency, and choice. Notice is information provided to the community about data use. Consent is the process of getting permission from a community or individual to use data. Notice Data users should provide individuals and communities with notice about:

- What information is being collected?
- Goals and potential benefits of data use
- Risks of data use Communities and individuals whose data will be used should be able to ask questions about, comment on, or object to data use.
- Data users may also need to give sources of data, such as health care providers, public health agencies, or researchers, the same type of information.

3.3.1. Individual notice

Individual notice may be needed when those whose data are being used are identifiable, for example, by name or home address, and when the risk of compromising privacy or confidentiality or stigmatizing an individual or small group is high.

3.3.2. Community Notice

In some cases, notice is given to the community, not individuals. Different methods may be used to give notice to a community, including:



- Community meetings or town halls
- Booths at community events
- Flyers or notices posted at libraries, community centers, or government offices
- Websites or Web-based advertising
- Media stories or advertisements
- Meetings with community leaders In cases where data about small groups of individuals are being used, more targeted notice may be needed.

3.4. Inviting community leaders to support data collection process

Data users have an ethical, and sometimes legal, obligation to promote community and individual engagement and participation in projects that use personally identifiable, de-identified, or aggregated data and when data use could stigmatize individuals, small groups, or communities. When data are used without appropriately engaging communities and individuals in data use decisions, trust may erode. Negative consequences of a breach of trust can have subsequent radiating effects, as shown in many case studies. Communities can be effectively engaged at every phase of the data lifecycle. Engagement can be a way to protect the rights of individuals, small groups, and communities. Engagement can also help researchers or others in using data to improve health.

Mechanisms for engaging community members

Data users can engage community members in a number of ways. When determining how to engage the community, data users should think about which types of engagement would provide legitimacy for the data effort. In a politically polarized community, for example, elected officials may not be seen as representing the interests of all voters.

a. Community Leaders

Community leaders can sometimes serve as representatives for a community as a whole. Leaders may include elected officials, leaders of community groups, leaders of religious or spiritual organizations, or even informal leaders. Use caution when using community leaders as representatives of the community, as they may not accurately represent the community's view as a whole, and they may not understand the concerns of subgroups or individuals within the community.

b. Focus Groups

Focus groups provide another way to engage communities, and are a good way to find out how individuals feel about an issue. Like engagement through community leaders, focus groups can miss issues that matter to subgroups if members of subgroups are not among the focus group members.

Health Extension Service Level III	Vision :01 Sep. 2019:	Page 19 of 24
	Copyright Info/Author: Federal TVET Agency	



c. Community Advisory Boards

Community advisory boards are a commonly used form of community engagement. To be effective, advisory boards should represent a range of interests and subgroups within a community. One issue that must be addressed in forming community advisory boards is how members will be chosen, and whether members will be leaders of community groups, or community members who are not leaders. Some data repositories have specific requirements about characteristics of representatives who serve on advisory boards.

d. Community Surveys

Community surveys can be completed online, on paper, or in personal interviews. They can help data users to gather and analyze information from many people as a form of community engagement. While a community survey can get input from more individuals, the scope of results may be limited because the scope of information is defined by the questions asked and by the characteristics of the individuals who choose to complete the survey.

**Self-Check -3****Multiple Choice Question**

Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What very important in the preparation for data collection is
 - a. preparing information for data collectors
 - b. preparing materials for data collectors
 - c. preparing tools for data collectors
 - d. all
2. data collectors need to bring the following tools and information with them on each day of data collection
 - a. schedule of visit to data collection site
 - b. a lists of data collection teams and contact information
 - c. their supervisors contact
 - d. details of the data collection sites
 - e. all
3. If data users are not open and transparent or if they do not offer choices to individuals and communities when required or appropriate, this can create
 - a. welcome surprises
 - b. destroy trust
 - c. may even reduce the ability to use health data to improve health in the future
 - d. difficulties of finalizing data collection
4. ___ can serve as conduits for notice to community members about data collection process
 - a. Data user
 - b. community leaders
 - c. neighbors
 - d. advisory boards
5. Communities can be effectively engaged at every phase of the data lifecycle and their engagement can be a way to protect
 - a. The rights of individuals
 - b. The rights of small groups, and communities
 - c. The rights of data collectors
 - d. The rights of data user
 - e. A and B only are answers
6. ___ are a good way to find out how individuals feel about an issue during community engagement in data collection process
 - a. Community leaders
 - b. Focus Groups
 - c. Community Advisory Boards
 - d. Administrators of the community
 - e. Community surveys



Note: Satisfactory rating - 6 points

Unsatisfactory - below 5 points

Answer Sheet

Score = _____

Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____



Reference

1. Data Collection Plan How-to Guide <http://wwwmanagementstudyguide.com>
2. Introduction to data collection https://en.wikipedia.org/wiki/Data_collection
3. Preparing Health Care Statistics and Delivering Service/Disease reports, HIT Module PDF 2012
4. <http://sens.unhcr.org/mobile-technology/training-data-collection-and-supervision>
5. Toolkit for Communities, Using Health Data How to collect, use, protect, and share data responsibly
6. documents/How_to_Conduct_a_Focus_Group.pdf
<https://assessment.trinity.duke.edu/>
7. Data collectors training in community health, Survey CTSA Community Health.pdf. <http://www.naccho.org>

Prepared By

No	Name	Educational Background	LEVEL	Region	College	Email	Phone Number
1	Fayere Guyasa	Enviromental	B	oromia	Nagelle HSC	koketfaye@gmail.com	0967629090
2	yitagasu yosef	Enviromental	B	oromia	Nagelle HSC	zemenyosef@gmail.com	0916450613
3	Jemal Abraham	Health Informatics	A	Harari	Harar HSC	elemojemal@gmail.com	0913122545
4	Serawit Mengistu	MPH	A	oromia	Nagelle HSC	ser9112001@gmail.com	0913136510
5	Abebe Tiko	Nursing	B	oromia	Nagelle HSC	abebetiko80@gmail.com	0931448876
6	Ephrem Berhanu		A	oromia	Mettu HSC	ephremberhanu403@gmail.com	0917468370
7	Tariku Olana	MPH	A	oromia	Nekemte HSC	tarikuolanagid@gmail.com	0935068440
8	Gemechu Geleti	Nursing	B	oromia	Nekemte HSC	no	0917091660
9	Solomon kifle	PHO	B	BGRS	Pawi HSC	solomonkeflie1@gmail.com	0918192159

