



**NATIONAL OPEN UNIVERSITY OF NIGERIA**

**FACULTY OF HEALTH SCIENCES**

**DEPARTMENT OF ENVIRONMENTAL HEALTH SCIENCES**

**COURSE CODE: EHS 510**



**COURSE TITLE: CONCEPT OF MONITORING AND EVALUATION**

**COURSE  
GUIDE**

**EHS 510: CONCEPT OF MONITORING AND EVALUATION**

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## **Introduction**

EHS 510 titled “Concept of monitoring and evaluation” is a one (1) Unit course with four (4) Modules and Fourteen (14) Units.

Monitoring and evaluation skills are essential tools for working in a dynamic development environment. They aid decision making and lead to improvements in project impact through maximizing the learning’s available.

This course is designed for senior managers who are actively involved in planning, management and evaluation of health sector reforms in developing countries. These senior managers might be either working in Ministries of Health, or they may be staff of embassies, international organizations, or NGOs developing partnerships with Ministries of Health within the scope of current health reforms.

## **What you will learn in this course**

In this course, you have the course units and a course guide. The course guide will tell you what the course is all about. It is general overview of the course materials you will be using and how to use those materials. It also helps you to allocate the appropriate time to each unit so that you can successfully complete the course within the stipulated time limit.

The course guide also helps you to know how to go about your Tutor-Marked Assignment which will form part of your overall assessment at the end of the course. Also, there will be regular tutorial classes that are related to this course, where you can interact with your facilitator and other students. Please, I encourage you to attend these tutorial classes.

## **Course aim**

The aim of this short course is to provide participants with a broad knowledge of advanced monitoring and evaluation tools and methods, and how to appropriately apply these in the health sector in developing countries.

## **Course Objectives**

To achieve the aim set above, there are objectives. Each unit has a set of objectives presented at the beginning of the unit. These objectives will guide you on what to concentrate / focus on while studying the unit. Please read the objectives before studying the unit and during your study to check your progress.

The Comprehensive Objectives of the Course are given below. At the end of the course the participants will be able to:

- Compare and critically discuss the fundamental concepts that underpin effective monitoring and evaluation of health programs within health systems
- Formulate the most appropriate M&E strategy in a given situation, develop M&E plans, contrast and adapt suitable evaluation designs, tools and indicators
- Appraise and select new and innovative approaches to M&E ranging from the appropriate use of technology through to new theoretical frameworks and approaches
- Critically analyze how aid architecture and multiple stakeholders in the health system influence the design of an M&E strategy as well as participation and decision making

## **Working through this course**

To successfully complete this course, you are required to read each study unit, read the textbooks materials provided by the National Open University.

Reading the referenced materials can also be of great assistance.

Each unit has self-assessment exercises which you are advised to do and at certain periods during the course you will be required to submit your assignment for the purpose of assessment.

There will be a final examination at the end of the course. The course should take you about 17 weeks to complete.

This course guide will provide you with all the components of the course how to go about studying and hour you should allocate your time to each unit so as to finish on time and successfully.

## **Course materials**

The major components of the course are:

1. Course Guide
2. Study Units
3. Text Books
4. Assignment File
5. Presentation Schedule



## **Study units**

There are 14 study units and 4 modules in this course. They are:

### **Module 1**

**Unit 1** Concept of Monitoring & Evaluation [M&E]

**Unit 2** Quality and Characteristics of Monitoring and evaluation in  
Environmental health services

**Unit 3** The Role of monitoring and Evaluation in Environmental health  
services

**Unit 4** Monitoring versus Evaluation

### **Module 2**

**Unit 1** Post-Katrina Medical Surveillance

**Unit 2** Ethical Harms in Community Health Research

**Unit 3** Best Practices in Community Health Research

### **Module 3**

**Unit 1** Evaluation

**Unit 2** Evaluation Design

**Unit 3** Computer Activities and Target Group

**Unit 4** Instrument for Gathering Qualitative and Quantitative Information

### **Module 4**

**Unit 1** Focus Groups

**Unit 2** Data Collection

**Unit 3** Methods of Data Collection

There are activities related to the lecture in each unit which will help your progress and comprehension of the unit. You are required to work on these exercises which together with the TMAs will enable you to achieve the objectives of each unit.

### **Presentation Schedule**

There is a time-table prepared for the early and timely completion and submissions of your TMAs as well as attending the tutorial classes. You are required to submit all your assignments by the stipulated time and date. Avoid falling behind the schedule time.

### **Assessment**

There are three aspects to the assessment of this course.

The first one is the self-assessment exercises. The second is the tutor marked assignments and the third is the written examination or the examination to be taken at the end of the course.

Do the exercises or activities in the unit by applying the information and knowledge you acquired during the course. The tutor-marked assignments must be submitted to your facilitator for formal assessment in accordance with the deadlines stated in the presentation schedule and the assignment file.

The work submitted to your tutor for assessment will count for 30% of your total course work.

At the end of this course, you have to sit for a final or end of course examination of about a three hour duration which will count for 70% of your total course mark.

### **Tutor-Marked Assignment**

This is the continuous assessment component of this course and it accounts for 30% of the total score. You will be given Three (3) TMAs by your facilitator to answer. The three of which must be answered before you are allowed to sit for the end of course examination.

These answered assignments are to be returned to your facilitator.

You're expected to complete the assignments by using the information and material in your readings, references and study units.

Reading and researching into you references will give you a wider via point and give you a deeper understanding of the subject.

1. Make sure that each assignment reaches your facilitator on or before the deadline given in the presentation schedule and assignment file. If for any reason you are not able to complete your assignment, make sure you contact your facilitator before the assignment is due to discuss the possibility of an extension. Request for extension will not be granted after the due date unless there in exceptional circumstances.

2. Make sure you revise the whole course content before sitting or the examination. The self-assessment activities and TMAs will be useful for this purposes and if you have any comment please do before the examination. The end of course examination covers information from all parts of the course.

### **Course Marking Scheme**

Assignment	Marks
Assignments 1 – 3	Three assignments, three marks of the three count at 10% each–30% of course marks.
End of course examination	70% of overall course marks
Total	100% of course materials.

### **Facilitators/Tutors and Tutorials**

Sixteen (16) hours are provided for tutorials for this course. You will be notified of the dates, times and location for these tutorial classes.

As soon as you are allocated a tutorial group, the name and phone number of your facilitator will be given to you.

These are the duties of your facilitator: He or she will mark and comment on your assignment. He will monitor your progress and provide any necessary assistance you need. He or she will mark your TMAs and return to you as soon as possible.

(You are expected to mail your tutored assignment to your facilitator at least two days before the schedule date).

Do not delay to contact your facilitator by telephone or e-mail for necessary assistance if you do not understand any part of the study in the course material. You have difficulty with the self assessment activities. You have a problem or question with an assignment or with the grading of the assignment.

It is important and necessary you attend the tutorial classes because this is the only chance to have face to face contact with your facilitator and to ask questions which will be answered instantly. It is also a period where you can say any problem encountered in the course of your study.

### **Summary**

This advanced practitioners' course equips participants with up-to-date knowledge and state-of-the-art monitoring and evaluation (M&E) tools enabling them to answer such questions as: What models, frameworks and tools are suitable for a specific evaluation? How to balance the perspectives of different stakeholders?

Monitoring and evaluation skills are essential tools for working in a dynamic development environment. They aid decision making and lead to improvements in project impact through maximizing the learning's available.

This course is designed for senior managers who are actively involved in planning, management and evaluation of health sector reforms in developing countries. These senior managers might be either working in Ministries of Health, or they may be staff of embassies, international organisations, or NGOs

developing partnerships with Ministries of Health within the scope of current health reforms.

At the end of this unit, you should be able to:

- Compare and critically discuss the fundamental concepts that underpin effective monitoring and evaluation of health programs within health systems
- Formulate the most appropriate M&E strategy in a given situation, develop M&E plans, contrast and adapt suitable evaluation designs, tools and indicators
- Appraise and select new and innovative approaches to M&E ranging from the appropriate use of technology through to new theoretical frameworks and approaches
- Critically analyze how aid architecture and multiple stakeholders in the health system influence the design of an M&E strategy as well as participation and decision making

The list of questions expected to be answered is not limited to the above list. Finally, you are expected to apply the knowledge you have acquired during this course to your practical life.

I wish you success in this course.

**Course Code: EHS 510**

**Course Title: Concept of Monitoring and Evaluation**

**Course Developer/Writer: Dr. Usman N. Gimba  
Department of Biological Sciences  
IBB University Lapai.**

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## **Module 1**

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## **UNIT 1 CONCEPT OF MONITORING & EVALUATION [M&E]**

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### **1.0 Introduction**

This advanced practitioners' course equips participants with up-to-date knowledge and state-of-the-art monitoring and evaluation (M&E) tools enabling

them to answer such questions as: What models, frameworks and tools are suitable for a specific evaluation? How to balance the perspectives of different stakeholders?

Monitoring and evaluation skills are essential tools for working in a dynamic development environment. They aid decision making and lead to improvements in project impact through maximizing the learning's available.

This course is designed for senior managers who are actively involved in planning, management and evaluation of health sector reforms in developing countries. These senior managers might be either working in Ministries of Health, or they may be staff of embassies, international organizations, or NGOs developing partnerships with Ministries of Health within the scope of current health reforms.

The new millennium has seen an increase in global aid for health. At the same time there is increasing emphasis on results, impact and aid effectiveness. Ongoing health reforms involve new modes of planning and implementation, new types of partnerships and cooperation. Are the reforms actually achieving their aims? What factors contribute to success or failure in a given context?

There is a need to examine whether projects have an impact on population health, and whether the changes can be attributed to a specific intervention. Monitoring and Evaluation (M&E) plays a crucial role in the planning of health sector reforms and policy shifts. At the same time, the sector requires innovative thinking in order to adapt to existing M&E systems.

Adaptations in M&E systems are needed to monitor whether resource allocation follows priorities, scarce human resources are being used efficiently, and essential health services reach the poor and disadvantaged.



## **2.0 Objectives**

At the end of this unit, you should be able to write on the concept Monitoring and Evaluation.

## **3.0 Main content**

### **3.1 Definition of the term Monitoring and Evaluation**

Monitoring and evaluation skills are essential tools for working in a dynamic development environment. They aid decision making and lead to improvements in project impact through maximizing the leanings available.

### **3.2 Emphasis on evaluation towards Monitoring**

Much effort has been given to introduce a routine of project evaluation once in every three to five years. Many project-implementing NGOs have started to do self-evaluations annually. However, the recent years have witnessed increasing importance to continuous monitoring. This is done more frequently than the evaluations. But then, these efforts are, invariably, restricted to few aspects of the programme. And in this, the search is always on for the most important issues to be monitored; and about how this could be done from a participatory framework and with better efficiency.

### **3.3 Monitoring of outputs towards outcomes and impacts**

Monitoring of outputs is nothing new. This has been in vogue for long and is done to evaluate the performance of an organization. However, it is imperative for us to ask: in what way is this beneficial for the target group? What are the outcomes, the results, and the impacts? This has often been neglected as it is more difficult to find out. Yet, it is more important, as the benefit points to the purpose of the project.

### **3.4 Monitoring for accountability towards management purposes**

Up to now, many funding agencies – particularly in Germany – request monitoring information for the accountability of the funded project. Increasingly NGOs discover that the continuous information on the outcomes and impacts of the project interventions is crucial for project steering. It allows making the fine-tuning of project activities in a way to maximize the impacts.

### **3.5 Monitoring by external experts by protagonists**

For a long time, funding agencies expected monitoring and evaluation to be done mainly by external experts as they are expected to be independent and objective. NGOs, however, have for many years appreciated the value of M&E done by the target groups and the project implementers. It is more immediate and facilitates learning processes. However, an external independent expertise is still considered to be very helpful to bring in "a different perspective".

NGO-IDEAs are aware of these trends and challenges against any change in these established concepts. Here, we are trying to find innovative, reliable and efficient solutions for participatory outcome and impact monitoring.

## **4.0 Conclusion**

Adaptations in M&E systems are needed to monitor whether resource allocation follows priorities, scarce human resources are being used efficiently, and essential health services reach the poor and disadvantaged.

## **5.0 Summary**

The course will allow key staff in Ministries of Health as well as external development partners to gain a deeper understanding of the role M&E plays in all aspects of the health system including the institutional, political, financial, managerial, human resource, inter-sectoral and public health dimensions. Topics covered include M&E, and management information systems which provide the basic data required for informed and effective decision making, planning and implementation in a health system. New M&E frameworks, techniques and information technology will also be examined.

## **6.0 Tutor-Marked Assignment**

1. Write concisely on the term Monitoring and Evaluation

### **Solution**

Monitoring and evaluation skills are essential tools for working in a dynamic development environment. They aid decision making and lead to improvements in project impact through maximizing the learning's available.

This course is designed for senior managers who are actively involved in planning, management and evaluation of health sector reforms in developing countries. These senior managers might be either working in Ministries of Health, or they may be staff of embassies, international organizations, or NGOs developing partnerships with Ministries of Health within the scope of current health reforms.

## **7.0 References**

United Nations development programme evaluation office - Handbook on  
Monitoring and Evaluating for

Results. <http://web.undp.org/evaluation/documents/handbook/me-handbook.pdf>

A UNICEF Guide for Monitoring and Evaluation - Making a Difference. <http://library.cphs.chula.ac.th/Ebooks/ReproductiveHealth/A%20UNICEF%20Guide%20for%20Monitoring%20and%20Evaluation%20Making%20a%20Difference.pdf>

## **UNIT 2 QUALITY AND CHARACTERISTICS OF MONITORING AND EVALUATION IN ENVIRONMENTAL HEALTH SERVICES**

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### **1.0 Introduction**

Community health is a branch of public health which focuses on people and their role as determinants of their own and other peoples' health in contrast to environmental health which focuses on the physical environment and its impact on people's health.

Community health is a major field of study within the medical and clinical sciences which focuses on the maintenance, protection, and improvement of the

health status of population groups and communities. It is a distinct field of study that may be taught within a separate school of public health or environmental health. The WHO defines community health as: environmental, social, and economic resources to sustain emotional and physical well being among people in ways that advance their aspirations and satisfy their needs in their unique environment.

## **2.0 Objectives**

At the end of this unit, you will get to know the quality and characteristics of monitoring and evaluation in environment in relation to health services.

## **3.0 Main content**

### **3.1 Definition of terms**

Community health is a major field of study within the medical and clinical sciences which focuses on the maintenance, protection, and improvement of the health status of population groups and communities. It is a distinct field of study that may be taught within a separate school of public health or environmental health. The WHO defines community health as: environmental, social, and economic resources to sustain emotional and physical well being among people in ways that advance their aspirations and satisfy their needs in their unique environment. Medical interventions that occur in communities can be classified as three categories: primary healthcare, secondary healthcare, and tertiary healthcare. Each category focuses on a different level and approach towards the community or population group. In the United States, community health is rooted within primary healthcare achievements. Primary healthcare programs aim to reduce risk factors and increase health promotion and prevention. Secondary healthcare is related to "hospital care" where acute care is administered in a hospital department setting. Tertiary healthcare refers to highly specialized care usually involving disease or disability management.

The success of community health programmes relies upon the transfer of information from health professionals to the general public using one-to-one or one to many communication (mass communication). The latest shift is towards health marketing.

Currently, the overall understanding on 'how M&E should be done' is changing in development cooperation:

### **3.2 Measuring community health**

Community health is generally measured by geographical information systems and demographic data. Geographic information systems can be used to define sub-communities when neighborhood location data is not enough. Traditionally community health has been measured using sampling data which was then compared to well-known data sets, like the National Health Interview Survey or National Health and Nutrition Examination Survey. With technological development, information systems could store more data for small scale communities, cities, and towns; as opposed to census data that only generalizes information about small populations based on the overall population. Geographical information systems (GIS) can give more precise information of community resources, even at neighborhood levels. The ease of use of geographic information systems (GIS), advances in multilevel statistics, and spatial analysis methods makes it easier for researchers to procure and generate data related to the built environment.

Social media can also play a big role in health information analytics. Studies have found social media being capable of influencing people to change their unhealthy behaviors and encourage interventions capable of improving health status. Social media statistics combined with geographical information systems (GIS) may provide researchers with a more complete image of community standards for health and well being.

## Categories of community health

### **3.3 Primary healthcare and primary prevention**

Community based health promotion emphasizes [primary prevention](#) and population based perspective (traditional prevention). It is the goal of community health to have individuals in a certain community to improve their lifestyle or seek medical attention. [Primary healthcare](#) is provided by [health professionals](#), specifically the ones a patient sees first that may refer them to secondary or tertiary care.

Primary prevention refers to the early avoidance and identification of risk factors that may lead to certain diseases and disabilities. Community focused efforts including immunizations, classroom teaching, and awareness campaigns are all good examples of how primary prevention techniques are utilized by communities to change certain health behaviors. Prevention programs, if carefully designed and drafted, can effectively prevent problems that children and adolescents face as they grow up. This finding also applies to all groups and classes of people. Prevention programs are one of the most effective tools health professionals can use to greatly impact individual, population, and community health.

### **3.4 Secondary healthcare and secondary prevention**

[Secondary prevention](#) refers to improvements made in a patient's lifestyle or environment after the onset of disease or disability. This sort of prevention works to make life easier for the patient, since it's too late to prevent them from their current disease or disability. An example of secondary prevention is when those with occupational low back pain are provided with strategies to stop their health status from worsening; the prospects of secondary prevention may even hold more promise than primary prevention in this case.



[Chronic diseases](#) has been a growing phenomena within recent decades, affecting nearly 50% of adults within the US in 2012. Such diseases include [asthma](#), [arthritis](#), [diabetes](#), and [hypertension](#). While they are not directly life-threatening, they place a significant burden on daily lives, affecting quality of life for the individual, their families, and the communities they live in, both socially and financially. Chronic diseases are responsible for an estimated 70% of healthcare expenditures within the US, spending nearly \$650 billion per year.

With steadily growing numbers, many community healthcare providers have developed self-management programs to assist patients in properly managing their own behavior as well as making adequate decisions about their lifestyle.<sup>[15]</sup> Separate from clinical patient care, these programs are facilitated to further educate patients about their health conditions as a means to adopt health-promoting behaviors into their own lifestyle.<sup>[16]</sup> Characteristics of these programs include:

- grouping patients with similar chronic diseases to discuss disease-related tasks and behaviors to improve overall health
- improving patient responsibility through daily disease-monitoring
- inexpensive and widely-known

Chronic Disease self-management programs are structured to help improve overall patient health and quality of life as well as utilize less healthcare resources, such as physician visits and emergency care. Furthermore, better self-monitoring skills can help patients effectively and efficiently make better use of healthcare professionals' time, which can result in better care. Many self-management programs either are conducted through a health professional or a peer diagnosed with a certain chronic disease trained by health professionals to conduct the program. No significant differences have been reported comparing

the effectiveness of both peer-led versus professional led self-management programs.

There has been a lot of debate regarding the effectiveness of these programs and how well they influence patient behavior and understanding their own health conditions. Some studies argue that self-management programs are effective in improving patient quality of life and decreasing healthcare expenditures and hospital visits. A 2001 study assessed health statuses through healthcare resource utilizations and self-management outcomes after 1 and 2 years to determine the effectiveness of chronic disease self-management programs. After analyzing 800 patients diagnosed with various types of chronic conditions, including heart disease, stroke, and arthritis, the study found that after the 2 years, there was a significant improvement in health status and fewer [emergency department](#) and physician visits (also significant after 1 year). They concluded that these low-cost self-management programs allowed for less healthcare utilization as well as an improvement in overall patient health. Another study in 2003 by the National Institute for Health Research analyzed a 7-week chronic disease self-management program in its cost-effectiveness and health efficacy within a population over 18 years of age experiencing one or more chronic diseases. They observed similar patterns, such as an improvement in health status, reduced number of visits to the emergency department and to physicians, shorter hospital visits. They also noticed that after measuring unit costs for both hospital stays (\$1000) and emergency department visits (\$100), the study found the overall savings after the self-management program resulted in nearly \$489 per person. Lastly, a meta-analysis study in 2005 analyzed multiple chronic disease self-management programs focusing specifically on hypertension, osteoarthritis, and diabetes mellitus, comparing and contrasting different intervention groups. They concluded that self-management programs

for both diabetes and hypertension produced clinically significant benefits to overall health.

On the other hand, there are a few studies measuring little significance of the effectiveness of chronic disease self-management programs. In the previous 2005 study in Australia, there was no clinical significance in the health benefits of osteoarthritis self-management programs and cost-effectiveness of all of these programs. Furthermore, in a 2004 literature review analyzing the variability of chronic disease self-management education programs by disease and their overlapping similarities, researchers found "small to moderate effects for selected chronic diseases," recommending further research being conducted.

Some programs are looking to integrate self-management programs into the traditional healthcare system, specifically primary care, as a way to incorporate behavioral improvements and decrease the increased patient visits with chronic diseases. However, they have argued that severe limitations hinder these programs from acting its full potential. Possible limitations of chronic disease self-management education programs include the following:

- underrepresentation of minority cultures within programs
- lack of medical/health professional (particularly primary care) involvement in self-management programs
- low profile of programs within community
- lack of adequate funding from federal/state government
- low participation of patients with chronic diseases in program
- uncertainty of effectiveness/reliability of programs

### **3.5 Tertiary healthcare**

In [tertiary healthcare](#), community health can only be affected with professional medical care involving the entire population. Patients need to be referred to

specialists and undergo advanced medical treatment. In some countries, there are more sub-specialties of medical professions than there are primary care specialists. [Health inequalities](#) are directly related to social advantage and social resources.

The complexity of community health and its various problems can make it difficult for researchers to assess and identify solutions. Community-based participatory research (CBPR) is a unique alternative that combines community participation, inquiry, and action. Community-based participatory research (CBPR) helps researchers address community issues with a broader lens and also works with the people in the community to find culturally sensitive, valid, and reliable methods and approaches.

Other issues involve access and cost of medical care. A great majority of the world does not have adequate health insurance. In low-income countries, less than 40% of total health expenditures are paid for by the public/government. Community health, even population health, is not encouraged as health sectors in developing countries are not able to link the national authorities with the local government and community action.

### **3.6 Community health in the Global South**

Access to community health in the Global South is influenced by geographic accessibility (physical distance from the service delivery point to the user), availability (proper type of care, service provider, and materials), financial accessibility (willingness and ability of users to purchase services), and acceptability (responsiveness of providers to social and cultural norms of users and their communities). While the epidemiological transition is shifting disease burden from communicable to non communicable conditions in developing countries, this transition is still in an early stage in parts of the Global South

such as South Asia, the Middle East, and Sub-Saharan Africa. Two phenomena in developing countries have created a "medical poverty trap" for underserved communities in the Global South — the introduction of user fees for public healthcare services and the growth of out-of-pocket expenses for private services. The private healthcare sector is being increasingly utilized by low and middle income communities in the Global South for conditions such as malaria, tuberculosis, and sexually transmitted infections. Private care is characterized by more flexible access, shorter waiting times, and greater choice. Private providers that serve low-income communities are often unqualified and untrained. Some policymakers recommend that governments in developing countries harness private providers to remove state responsibility from service provision.

Community development is frequently used as a public health intervention to empower communities to obtain self-reliance and control over the factors that affect their health. Community health workers are able to draw on their firsthand experience, or local knowledge, to complement the information that scientists and policy makers use when designing health interventions. Interventions with community health workers have been shown to improve access to primary healthcare and quality of care in developing countries through reduced malnutrition rates, improved maternal and child health and prevention and management of HIV/AIDS. Community health workers have also been shown to promote chronic disease management by improving the clinical outcomes of patients with diabetes, hypertension, and cardiovascular diseases.

Slum-dwellers in the Global South face threats of infectious disease, non-communicable conditions, and injuries due to violence and road traffic accidents. Participatory, multi-objective slum upgrading in the urban sphere significantly improves social determinants that shape health outcomes such as safe housing, food access, political and gender rights, education, and

employment status. Efforts have been made to involve the urban poor in project and policy design and implementation. Through slum upgrading, states recognize and acknowledge the rights of the urban poor and the need to deliver basic services. Upgrading can vary from small-scale sector-specific projects (i.e. water taps, paved roads) to comprehensive housing and infrastructure projects (i.e. piped water, sewers). Other projects combine environmental interactions with social programs and political empowerment. Recently, slum upgrading projects have been incremental to prevent the displacement of residents during improvements and attentive to emerging concerns regarding climate change adaptation. By legitimizing slum-dwellers and their right to remain, slum upgrading is an alternative to slum removal and a process that in it may address the structural determinants of population health

#### **4.0 Conclusion**

Community health is a major field of study within the medical and clinical sciences which focuses on the maintenance, protection, and improvement of the health status of population groups and communities. It is a distinct field of study that may be taught within a separate school of public health or environmental health.

#### **5.0 Summary**

Community health is a branch of public health which focuses on people and their role as determinants of their own and other people's health in contrast to environmental health which focuses on the physical environment and its impact on people's health.

#### **6.0 Tutor-Marked Assignment**

1. Define the term community health.
2. List the factor that influences access to community health in the Global South.

## **Solution**

-Community health is a branch of public health which focuses on people and their role as determinants of their own and other people's health in contrast to environmental health which focuses on the physical environment and its impact on people's health.

-Access to community health in the Global South is influenced by geographic accessibility (physical distance from the service delivery point to the user), availability (proper type of care, service provider, and materials), financial accessibility (willingness and ability of users to purchase services), and acceptability (responsiveness of providers to social and cultural norms of users and their communities).

## **7.0 References**

Center for Global Development. US Spending in Haiti: The Need for Greater Transparency and Accountability <http://web.undp.org/evaluation/handbook/documents/english/pme-handbook.pdf>

## **UNIT 3: THE ROLE OF MONITORING AND EVALUATION IN HUMANITARIAN PROGRAMMING**

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### **1.0 Introduction**

Monitoring and Evaluation have a range of purposes in humanitarian programming, but the critical one is ;better outcomes for crisis-affected populations from CARE’s humanitarian programming through accountability and learning. Monitoring and evaluation help in understanding how the assistance and support that CARE provides to disaster-affected communities affects them. It is therefore a critical part of CARE’s Humanitarian Accountability Framework (HAF). It allows us to compare the results of our humanitarian actions with our strategic intent (e.g. CARE Program Strategy, Humanitarian & Emergency Strategy, Core Humanitarian Standards) with technical standards (such as SPHERE and companions) and with expected outcomes and benchmarks for the response (from response strategy, proposal frameworks etc.). Efficient decision making and evidence based learning heavily depend on the quality and timeliness of monitoring & evaluation.



## **2.0 Objectives**

At the end of this unit, you will get to know the roles of monitoring and evaluation in humanitarian programming.

## **3.0 Main content**

### **3.1 General Overview**

Monitoring and Evaluation have a range of purposes in humanitarian programming, but the critical one is ; better outcomes for crisis-affected populations from CARE's humanitarian programming through accountability and learning.

Monitoring and evaluation help in understanding how the assistance and support that CARE provides to disaster-affected communities affects them. It is therefore a critical part of CARE's Humanitarian Accountability Framework (HAF). It allows us to compare the results of our humanitarian actions with our strategic intent (e.g. CARE Program Strategy, Humanitarian & Emergency Strategy, Core Humanitarian Standards) with technical standards (such as SPHERE and companions) and with expected outcomes and benchmarks for the response (from response strategy, proposal frameworks etc.). Efficient decision making and evidence based learning heavily depend on the quality and timeliness of monitoring & evaluation.

### **Roles of monitoring and evaluation in humanitarian responses**

Many team members will have responsibility for monitoring and evaluation activities in a humanitarian response. Therefore, it is important that a member of the response team is assigned to the function of coordinating monitoring and evaluation activities. This is usually a full time position. It is critical that the CO's M&E unit is closely involved with the response team from the very outset

of the humanitarian crisis. Thus ideally, the response M&E team should be led from the onset (including during needs assessments) by the CO's M&E coordinator. Where this capacity does not exist, it is important for the CO to appoint or recruit a M&E Coordinator for specifically for the humanitarian operation as quickly as possible. During a fast onset or large scale emergency the CARE emergency response roster can identify and mobilize additional capacities especially during the surge and scale-up phases. In certain cases the M&E Coordinator function can be combined with the function of leading Accountability and Learning initiatives – the MEAL (Monitoring, Evaluation, Accountability and Learning) approach.

### **Role of the Monitoring and Evaluation Coordinator in emergency team**

Many team members will have responsibility for monitoring and evaluation activities in an emergency response, in particular project managers and field officers who collect data on response activities. It is important that a member of the emergency team is designated overall responsibility for coordinating monitoring and evaluation activities. This is usually the head of the CO's monitoring and evaluation unit if one exists, and it is critical that they are closely involved with the emergency response team from the very outset of the response. Where this capacity does not exist, it is important that the CO appoint or recruit a Monitoring and Evaluation Coordinator for the emergency response operation as quickly as possible.

The key responsibilities of the Monitoring and Evaluation Coordinator in relation to the emergency response programme are to:

- help establish appropriate indicators at the outset of the emergency response (drawing on benchmarks, Sphere and other available tools)

- establish and coordinate monitoring systems including data collection, analysis and review
- Work closely with the CO Information Manager to prepare specific data collection methods and tools
- coordinate monitoring activities and inputs required of other team members
- Anticipate, plan and support reporting requirements
- ensure information gathered through monitoring activities is shared quickly and in an appropriate format with senior managers so that any problems arising can be addressed
- organise evaluation activities in line with CARE's learning policy.

Monitoring and evaluation advisors are available through RED roster for deployment to emergencies to assist with setting up and training in monitoring and evaluation systems in emergencies.

#### **4.0 Conclusion**

Monitoring and Evaluation have a range of purposes in humanitarian programming, but the critical one is ; better outcomes for crisis-affected populations from CARE's humanitarian programming through accountability and learning.

#### **5.0 Summary**

Monitoring and evaluation help in understanding how the assistance and support that CARE provides to disaster-affected communities affects them. It is therefore a critical part of CARE's Humanitarian Accountability Framework (HAF). It allows us to compare the results of our humanitarian actions with our strategic intent (e.g. CARE Program Strategy, Humanitarian & Emergency Strategy, Core Humanitarian Standards) with technical standards (such as

SPHERE and companions) and with expected outcomes and benchmarks for the response (from response strategy, proposal frameworks etc.). Efficient decision making and evidence based learning heavily depend on the quality and timeliness of monitoring & evaluation.

## **6.0 Tutor-Marked Assignment**

What is the major importance of monitoring and evaluation.

### **Solution**

Monitoring and evaluation help in understanding how the assistance and support that CARE provides to disaster-affected communities affects them. It is therefore a critical part of CARE's Humanitarian Accountability Framework (HAF). It allows us to compare the results of our humanitarian actions with our strategic intent (e.g. CARE Program Strategy, Humanitarian & Emergency Strategy, Core Humanitarian Standards) with technical standards.

## **7.0 References**

Handbook on Monitoring and Evaluating for Results. Prince Conway II; a M&E specialist from the Ministry of Health and Social Welfare was one of the those who achieved greatly in the health sector moving the Malaria data from 60% below base line to 85% above target.  
<http://web.undp.org/evaluation/documents/handbook/me-handbook.pdf>

## **UNIT 4: MONITORING VERSUS EVALUATION**

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##### **3.1 Prioritization of Health Risks**

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##### **3.3 Environmental Monitoring Detection Strategies**

##### **3.4 Dissemination of Accurate Information**

#### **4.0 Conclusion**

#### **5.0 Summary**

#### **6.0 Tutor-Marked Assignment**

#### **7.0 References**

#### **1.0 Introduction**

Coordinated effort and prioritization of health risks is critical in a disaster aftermath. It can become a challenge when a relatively rapid response is needed and there is virtually no time to prepare for it, noted Kellogg Schwab

A straightforward, relevant, ongoing health evaluation conducted by health professionals is needed during disasters.

This was true for Hurricane Katrina, which had a disaster area of 90,000 square miles, creating community-wide and regional issues. Communication is very important for a successful rapid public health assessment. Communication in

the Gulf Coast region during the Hurricane Katrina aftermath was inadequate, creating one of the biggest challenges, observed Schwab.

## **2.0 Objective**

At the end of this unit, you will get to know the differences between monitoring and evaluation.

## **3.0 Main content**

### **3.1 Prioritization of Health Risks**

A straightforward, relevant, ongoing health evaluation conducted by health professionals is necessary during disasters, since it provides information on the prevalence and incidence of potential diseases and targets limited resources to evaluate acute health issues such as infectious diseases, chemical exposure, heat exhaustion and heat stroke, lack of medications, and mental illness. Evaluating these immediate versus long-term risks through rapid assessment during a disaster will be challenging. Hence, There is a real need for precise assessment tools and technology to address chemical and biological exposures.

Biological health risk assessment in contaminated areas needs to include viruses and protozoa in addition to bacteria. Because many viruses and protozoa can persist in the environment for much longer periods of time than bacteria, they can contribute to morbidity and mortality in humans. However, it has been reported that routine biological monitoring does not usually include viruses and protozoa and that this would need to be addressed in the future.

For chemical exposures, such as volatile and semi-volatile organic compounds, total metals, pesticides, herbicides, total petroleum hydrocarbons, and polychlorinated biphenyls, researchers need to include other specific exposure routes, such as dermal and airborne exposure routes, in addition to ingestion via drinking water.

### **3.2 Challenges of Rapid Response Assessment**

Multiple pitfalls have prevented assessment success after Hurricane Katrina. One of the major issues was damage to the telecommunication infrastructure, which limited the ability to communicate within the region. Land lines and the cell phone towers were damaged, and satellite phones were not working reliably. In addition, roads and bridges were impassable in some areas, and the shortage of gas supplies limited people's ability to travel in order to perform rapid assessments. In addition to infrastructure damage limiting access, there were governance and training barriers. Multiple jurisdictions may have meant that assessors could not enter all places of interest (e.g., shelters), which slowed down health assessments. The lack of trained personnel who could rapidly adapt hindered the successful response as well.

Targeted health surveys applicable to the situation, using field-tested methods versus laboratory prototypes for agent identification during the assessments, were challenging in the very rapid response mode. For example, delay in sample analysis and ineffective dissemination of findings were problematic for rapid assessments. During the unfolding disaster, multiple contaminants—both microbes and chemicals—originating from multiple sources—municipal, industrial, and small businesses—and multiple media, including air, water, and sediment, were constantly changing, creating overlaying scenarios that had to be addressed during the assessments. For the field of environmental health, this area suggests the need for further discussion.

Despite the many challenges to conducting health risk assessment, there were some positive outcomes. For example, Harvard University and Johns Hopkins University, teaming up with the Centers for Disease Control and Prevention, set up a toll-free hotline in Mississippi to provide the public with direct access to public health professionals who could provide information on



**Plate 1:** Multiple pitfalls prevented assessment success after Hurricane Katrina. Compromised structures created limited accessibility, preventing assessors from entering some areas.

SOURCE: Johns Hopkins University (unpublished).

### **3.3 Environmental Monitoring Detection Strategies**

One of the issues for environmental monitoring is determining what detection strategies will be used and what will be designated as the gold standard. For example, the Environmental Protection Agency (EPA) collected air samples from multiple locations across the New Orleans metropolitan area on September 11 and 13, 2005. These data were collected with portable, battery-powered monitors that are often used in an emergency response because they give immediate readings; however, the data obtained from these monitors could not easily be compared with the EPA standards. EPA does not use data from these types of monitors either for compliance purposes or for generating routine air quality advisories, noted Schwab. Even so, to provide the public with a point of reference, EPA compared the results with its air quality index for inhalable coarse particles, also known as PM 10.



Schwab noted that assessments need to be broad in focus for infectious diseases such as dysentery, cholera, and gastroenteritis. He noted that one of the largest outbreaks in a shelter was a norovirus in the Houston sports complex that housed 24,000 evacuees. Approximately 1,000 of the evacuees were infected with the norovirus, which is a resistant microorganism that easily transmits from person to person. Health officials need to understand that even though water, sediment, and food are negative for bacteria, they can still contain other pathogens of potential health concern for both morbidity and mortality.

Microbial analysis in the field is technically challenging, and the detection assays must be sensitive, specific, and capable of detecting low concentrations of target agents without interference from background materials. Sample inhibition is very challenging, because of false negatives due to the inability of the assay to work effectively using that detection technique. This problem needs to be addressed with appropriate quality controls and quality assurance during the sampling. In addition, current sample matrixes are

Providing information to frontline healthcare providers, including shelter managers and local and regional coordinators, during telecommunication gridlock was challenging.

Water samples are usually concentrated from large volume to small volume, which concentrates the inhibitors. Large volumes of air samples are concentrated either on a filter or into a liquid medium for subsequent analysis. These concentration steps are not 100 percent efficient; thus, assessors need to take into account the ability to know what the numbers actually mean with respect to the exposure levels during the sampling. More importantly, the nucleic acid-based or antibody-based molecular detection techniques usually do not determine the infectious nature of the microorganism.

### **3.4 Dissemination of Accurate Information**

As events were unfolding, health officials struggled with actual versus perceived risk, and providing accurate information to frontline healthcare providers, including shelter managers and local and regional coordinators, was hampered by the telecommunication gridlock. Disseminating accurate and verified information to agencies and the news media, in addition to the frontline staff, is vital. The absence of authority for implementing public health measures can limit effectiveness, thus causing disease surveillance and preventive measures to fall through the cracks.

Response personnel faced a dangerous environment with multiple exposure hazards, and their own mental health was very important to monitor as well. Agencies and groups that send their personnel to an area need to consider and implement effective strategies for pre-deployment and post-deployment debriefings, such as pre-deployment blood draws and basic infectious disease characterization.

### **3.5 Rapid Assessment: Themes for Future Discussion**

Rapid health response is a critical component of any disaster response. On the basis of his experience in the region, Schwab highlighted some areas for further discussion in order to prepare for future disasters:

- Enhancing communication to assist in rapid health assessment,
- Involving the public health community in articulating health issues,
- Preparing assessors prior to an event and assisting them in adapting to changing situations,
- Developing simple and meaningful target goals,
- Developing effective strategies to provide targeted and timely results, and
- Providing concise and accurate public health information and advice.

Schwab noted that additional work is needed to ensure effective communication strategies and prepare responders for health assessment. Although the next large disaster may be different from Hurricane Katrina, the same concepts of public health, infrastructure, and basic needs will still be present.

#### **4.0 Conclusion**

Rapid health response is a critical component of any disaster response. On the basis of his experience in the region, Schwab highlighted some areas for further discussion in order to prepare for future disasters:

- Enhancing communication to assist in rapid health assessment,
- Involving the public health community in articulating health issues,
- Preparing assessors prior to an event and assisting them in adapting to changing situations,
- Developing simple and meaningful target goals,
- Developing effective strategies to provide targeted and timely results, and
- Providing concise and accurate public health information and advice.

#### **5.0 Summary**

As events were unfolding, health officials struggled with actual versus perceived risk, and providing accurate information to frontline healthcare providers, including shelter managers and local and regional coordinators, was hampered by the telecommunication gridlock,

#### **6.0 Tutor-Marked Assignment**

1. List two factors to take into consideration to avoid future disaster.

##### **Solution**

- Preparing assessors prior to an event and assisting them in adapting to changing situations,

- Developing simple and meaningful target goals,
- Developing effective strategies to provide targeted and timely results.

## **7.0 References**

United Nations Evaluation Group (UNEG). "Archived copy". Archived from the original on 2013-11-05. Retrieved 2014-05-27.

United Nations Joint Inspection Unit. <https://www.unjiu.org/>

## **MODULE 2**

**Unit 1** Post-Katrina Medical Surveillance

**Unit 2** Ethical Harms in Community Health Research

**Unit 3** Best Practices in Community Health Research

### **UNIT 1 POST-KATRINA MEDICAL SURVEILLANCE**

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**3.3** Populations of Interest

**3.4** Exposures of Interest

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**4.0** Conclusion

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**7.0** References

## **1.0 Introduction**

Before deciding what medical surveillance projects need to be established for tracking the health impacts of Hurricane Katrina, scientists and policy makers need to answer some questions?

- What are the questions that needed to be answered?
- What resources are available to answer these questions?
- What approaches can be used?
- What barriers can be foreseen, and which can we attempt to overcome?

Answering these questions will help to minimize the impact on the victims and serve to inform future efforts under other disaster conditions. Most of these questions involve several components, such as the population of interest, the exposure of interest, and the outcomes of interest. Once scientists know the components of the question, it will be easier to determine which research approach to undertake.

## **2.0 Objectives**

At the end of this unit, you will get some of the questions you need to answer before deciding what medical surveillance projects that need to be established.

## **3.0 Main content**

### **3.1 General Overview**

Before deciding what medical surveillance projects need to be established for tracking the health impacts of Hurricane Katrina, scientists and policy makers need to answer some questions:

- What are the questions that need to be answered?
- What resources are available to answer these questions?
- What approaches can be used?

- What barriers can be foreseen, and which can we attempt to overcome?

Answering these questions will help to minimize the impact on the victims and serve to inform future efforts under other disaster conditions. Most of these questions involve several components, such as the population of interest, the exposure of interest, and the outcomes of interest, said David Goff of Wake Forest University. Once scientists know the components of the question, it will be easier to determine which research approach to undertake.

### **3.2 How to Choose the Right Question**

There may be some particular exposures or outcomes that can be examined on the basis of data from other similar types of events. In the case of Hurricane Katrina, there are many unique aspects of this natural calamity and the exposed population. Questions could thus be guided by some consideration of those unique aspects. Ideally, the focus would be on the public health burden of the outcome by looking at issues that have significant impacts on population health through morbidity, mortality, or cost, rather than on rare aspects. The preventability of the outcome is also worth considering. It is far more important to track and study issues that we think we have knowledge about for risk mitigation if a similar type of event happens in the future than to get distracted by aspects that are less known.

### **3.3 Populations of Interest**

Researchers need to answer the question of population of interest first, because it has implications regarding how a monitoring system or a research project would be set up. Determining what defines the population of interest is complex. It could be either all the people exposed to Hurricane Katrina, evacuees only, or first and subsequent responders. This is not a straightforward question and quickly becomes complicated. Considering individual exposure to

Hurricane Katrina, more questions arise about who was exposed and what was the exposure. The population of interest could be defined as either the individuals who evacuated or those who remained in the New Orleans area. In addition, some evacuees relocated to other cities and did not return to the Gulf Coast, which complicates trying to determine if they are part of the group of interest.

### **3.4 Exposures of Interest**

The exposures of interest may be mold, air, water, soil, changes to the built environment, housing quality, community characteristics and resources, and other exposures that will have some impact on human health. While researching exposures of interest, it is important to take into consideration the time perspective for the exposure. If a researcher is interested in acute exposures, the data collection window is going to be narrower than for monitoring long-term exposures. This is not to say that acute exposures do not have potential for long-term effects.

### **3.5 Outcomes of Interest**

Medical conditions have an impact on the type of surveillance system that will need to be set up. Infectious disease in the area is one of the outcomes of interest, considering the potential contamination of the water supply and the crowded conditions under which people have been living and may continue to live. It is not immediately clear from the initial surveillance which chronic diseases should be researched as outcomes of Hurricane Katrina. Categorizing these will be important. Any medical surveillance program following a disaster needs to include mental health conditions, occupational disorders, and traumas.

The program needs to be holistic in its understanding of the complexity of the exposures. For example, an event such as Hurricane Katrina can lead to



substantial morbidity caused by strokes and cardiovascular conditions, which have been related to stressful life events.

The choice of indicators of health has an impact on the type of surveillance program that will be established. If the researchers' interest is hospitalizations that imply a set of projects in which they could monitor hospitalizations, other health care resource utilization, emergency department visits, and outpatient visits. The tracking of ambulatory care visits as well as hospital visits in the days immediately after Hurricane Katrina has already been done.

The time horizon is also important for outcomes. The current data available from New Orleans provide a very-short-term snapshot of what might have happened immediately after Hurricane Katrina—for example, whether there were any immediate outbreaks of infectious diseases, insect and snake bites, and so forth. Interest in medium- and long-term outcomes should not be undervalued.

Patient-centered outcomes, such as the functional status of the people who have been exposed to and hurt by Hurricane Katrina, are an important long-term issue. To identify hospitalizations and outpatient visits, researchers will need to be able to interact with the exposed people, ask them about their functional status, and perhaps perform some hands-on examinations. The same is true for health-related quality of life, a particularly important patient-centered outcome.

### **3.6 Potential Medical Surveillance Approaches**

Many different approaches can be used in research and in public health practice. One approach is to use an existing model and perform cross-sectional population surveys. Another approach is to establish a cohort that is assessed at baseline and followed over time. These approaches should be designed to be representative of the population, so that appropriate inferences can be made

about the health condition of the population. The approaches should also enable direct examination of people and include the collection of questionnaire data.

Several surveillance methods are currently used in the United States. The use of a method in its current or modified form may be useful during disasters such as Hurricane Katrina. For example, previously used national surveillance methods—such as the National Health and Nutrition Examination Survey, mobile examination and survey units, the Nationwide Inpatient Sample, the National Hospital Discharge Survey, surveillance of hospitalizations, and the National Ambulatory Medical Care Survey surveillance of outpatient encounters—could be used. There are certain strengths to this approach, noted Goff. The existing surveillance systems could be expanded in the Gulf Coast area for oversampling—because the expertise, methods, and infrastructure are already available. Because these surveys are national, multiple conditions are tracked and comparison data are available. Thus, it is possible to compare the disaster experience with experiences in other parts of the country. The drawbacks of using these national surveys following a disaster are that there are no direct examination data, there is no follow-up in any of these surveys, and there is limited ability to control data collection.

Medical surveillance for multiple conditions is possible in assessing the health impacts of the victims of Hurricane Katrina. There are multiple surveillance models readily available—for example, the Reasons for Geographic and Racial Differences in Stroke (REGARDS) cohort study being conducted by the University of Alabama, Birmingham. This 30,000-person cohort study has representatives from 48 states, a unique feature that could be useful to track the health impacts of Hurricane Katrina because evacuees were scattered around the country.

In the cohort study, direct examinations are done in the subjects' homes through a contract with Examination Management Services Inc. (EMSI), a company that performs insurance physicals. EMSI trained its staff in research methodology and human subject protection in order to participate in this study. The use of this surveillance system has a number of strengths. It enables the researchers to perform direct examination and follow-up, researchers have substantive control over the data elements collected, multiple conditions and exposures can be assessed, internal comparison data can be generated, and people who do not move back to the Gulf Coast area can be included in this type of design because the home visits can occur anywhere in the country. One drawback of this study design is that, although this model has been previously used, some additional infrastructure would have to be developed.

Building on existing national surveillance programs is also appealing. Scientists should define the questions of interest as soon as possible so that the right approach to pursue those questions is chosen. Although there are multiple barriers, they are foreseeable and most of them are manageable.

Challenges to Collecting Medical Information about Individuals from the Affected Region

#### **4.0 Conclusion**

There may be some particular exposures or outcomes that can be examined on the basis of data from other similar types of events. In the case of Hurricane Katrina, there are many unique aspects of this natural calamity and the exposed population. Questions could thus be guided by some consideration of those unique aspects. Ideally, the focus would be on the public health burden of the outcome by looking at issues that have significant impacts on population health through morbidity, mortality, or cost, rather than on rare aspects.

#### **5.0 Summary**

A valuable lesson that the medical community has learned from Katrina is that electronic health records should be backed up off-site on web servers.

## **6.0 Tutor-Marked Assignment**

1. What are the questions that needed to be answered before deciding what medical surveillance projects need to be established?

### **Solution**

- What are the questions that need to be answered?
- What resources are available to answer these questions?
- What approaches can be used?
- What barriers can be foreseen, and which can we attempt to overcome?

## **7.0 References**

United Nations Evaluation Group (UNEG). "Archived copy". Archived from the original on 2013-11-05. Retrieved 2014-05-27. United Nations Joint Inspection Unit. <https://www.unjiu.org>

## **UNIT 2 ETHICAL HARMS IN COMMUNITY HEALTH RESEARCH**

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#### **2.0 Objectives**

#### **3.0 Main content**

##### **3.1 General Overview**

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#### **5.0 Summary**

#### **6.0 Tutor-Marked Assignment**

#### **7.0 References**

#### **1.0 Introduction**

The protection of human subjects is the focus of a substantial number of articles and publications on medical ethics for individual patients, but not all of these principles are applicable to community-based research. Researchers need to look beyond the Belmont principles to more community-centered ethical frameworks, such as virtue and communitarian ethics and the ethics of care, as well as postmodern ethics, which deals with power issues, otherness, and cultural diversity. In addition to these, non-Western models, such as Native American ethical philosophies, with their emphasis on protecting communal values in knowledge production, need to be considered.

#### **2.0 Objectives**

At the end of this unit, you should be able to write on ethical harms in community health research.

### **3.0 Main content**

#### **3.1 General Overview**

The protection of human subjects is the focus of a substantial number of articles and publications on medical ethics for individual patients, but not all of these principles are applicable to community-based research. Researchers need to look beyond the Belmont principles to more community-centered ethical frameworks, such as virtue and communitarian ethics and the ethics of care, as well as postmodern ethics, which deals with power issues, otherness, and cultural diversity. In addition to these, non-Western models, such as Native American ethical philosophies, with their emphasis on protecting communal values in knowledge production, need to be considered.

The Collaborative Initiative for Research Ethics and Environmental Health project, funded by the National Institutes of Health, includes an interdisciplinary project team of public health, social science, biomedical, behavioral, and humanities researchers from Syracuse University and four other collaborating universities. The project focuses on ethical issues surrounding community-based research collaborations between researchers and communities in the fields of environmental and community health research. It represents a unique experience in dealing with research ethics concerns for Native American, African American, Hispanic, and Southeast Asian populations in environmental and community health research. The project is trying to move research ethics from focusing on ethical harms to individual human subjects to the whole community as a subject. The ethics field lags behind in looking at the community as a subject of research. The project has developed courses at universities exploring community-based and multicultural ethical dimensions of the community as a research subject, working with the multiple voices and problems of community members and the research conditions of multiple community contexts and what they mean for research ethics.

## **Common Ethical Problems in Community Research**

Quigley singled out six common ethical problems in community research that can harm communities and cause distrust in the relationships between scientific researchers and community members.

### **1. Irrelevance to Community Needs**

Irrelevance to community needs can occur when research approaches are academically controlled, research teams are inexperienced with the community's needs and values, and there are limited provisions for community participation. Although research designs and methods are scientifically interesting to academics, they are irrelevant and sometimes damaging to community needs. If researchers bring too many research efforts into an area that has been affected by contamination, they run the risk of the research being irrelevant to the community. Examples of "parachute research" demonstrate how it can end up being damaging to community needs when the community is not engaged from the beginning.

### **2. Exploitation of Community Members**

Exploitation of community members may create serious inequities in the research process, whereby community members are burdened with research activities without compensation or funding for community expenses, leading to exploitation of community members and resources. Many communities complain about researchers using their time or about helping with recruitment of subjects or performing actual research activities, for which they do not get compensated. This is a problem, particularly in underserved communities that are already burdened by a number of other needs. Researchers have to be aware of exploitation of community resources and ensure that they provide funding for any research activities they want to perform in the community.

### **3. Community Stigmatization**

Community stigmatization is often caused by a lack of attention to or development of group or community needs and values in scientific research practices. This produces ethical inadequacies in the research obligations of community consent, involvement, comprehension, and risks or benefits from a research effort. Without obtaining community consent or approval for research efforts, researchers can put communities at risk for community stigmatization in publications. In addition, researchers should report results back to communities before publishing them, so that the community is allowed to provide rebuttals or alert researchers to the harm that might come to them from publication of the research findings. This issue illustrates the need for developing community approval and consent and community research protections.

### **4. Lack of Comprehension by the Community**

Without full comprehension of a research intervention and discussion of the risks and benefits of research designs, communities can suffer from these more specific ethical harms:

- Research findings that bring no public health benefit to the community and may be used as justification for no further follow-up of research activities in a community (i.e., studies that often yield statistically insignificant findings in small populations),
- Unintended social or cultural harms (treatment of tissue samples, violations of cultural practices, overriding communal norms), and
- Researchers' indifference that may intimidate or demoralize community members.



Communities can be educated on a number of health risk methodologies, and they should be there with the researchers to understand what the investigation entails, whether the community wants it or not, and whether it is going to be beneficial to them or not. Researchers need to help the community understand the methods of their research. Although comprehension of high-level technical methods can be very hard for disadvantaged communities, they can understand the information if researchers give them enough support and infrastructure to evaluate these health risk methodologies.

## **5. Exclusion of Community Contextual Knowledge**

Exclusion of community contextual knowledge occurs when research designs exclude the observations, local knowledge, and experiences reported by community members. This can lead to inadequate information about diet, lifestyle, and other relevant exposure information. It can lead to inadequate recruitment and participation of research subjects. If the community was not involved in collecting the data about diet, lifestyle, subsistence, or other relevant aspects of the community's experience with the research question, researchers may not get actual exposure data from the community's embedded conditions. Researchers run the risk of overlooking important data sources when they make assumptions about lifestyle scenarios without being in the field or working with communities to get actual contextual information, asserted.

## **6. Exploitation of Community Data**

Community approval and consent procedures are not well developed for research dissemination, publication, or uses of community tissue samples, archives of local knowledge, or other community data. This may lead to the exploitation of community data. Protocols could be developed with approvals and consent from the community. Furthermore, these protocols need input from

the community to avoid situations in which researchers take community data, use them, and transfer them to other institutions or use them inappropriately. This may lead to further stigmatization of the community.

#### **4.0 Conclusion**

Quigley singled out six common ethical problems in community research that can harm communities and cause distrust in the relationships between scientific researchers and community members.

#### **5.0 Summary**

Protocols could be developed with approvals and consent from the community. Furthermore, these protocols need input from the community to avoid situations in which researchers take community data, use them, and transfer them to other institutions or use them inappropriately.

#### **6.0 Tutor-Marked Assignment**

List the six common ethical problems in community research that can harm communities and cause distrust in the relationships between scientific researchers and community members.

#### **Solution**

##### **1. Irrelevance to Community Needs**

Irrelevance to community needs can occur when research approaches are academically controlled, research teams are inexperienced with the community's needs and values, and there are limited provisions for community participation.

## 2. Exploitation of Community Members

Exploitation of community members may create serious inequities in the research process, whereby community members are burdened with research activities without compensation or funding for community expenses, leading to exploitation of community members and resources.

## 3. Community Stigmatization

Community stigmatization is often caused by a lack of attention to or development of group or community needs and values in scientific research practices. This produces ethical inadequacies in the research obligations of community consent, involvement, comprehension, and risks or benefits from a research effort.

## 4. Lack of Comprehension by the Community

Without full comprehension of a research intervention and discussion of the risks and benefits of research designs, communities can suffer from these more specific ethical harms:

- Research findings that bring no public health benefit to the community and may be used as justification for no further follow-up of research activities in a community (i.e., studies that often yield statistically insignificant findings in small populations),
- Unintended social or cultural harms (treatment of tissue samples, violations of cultural practices, overriding communal norms), and
- Researchers' indifference that may intimidate or demoralize community members.

## 5. Exclusion of Community Contextual Knowledge

Exclusion of community contextual knowledge occurs when research designs exclude the observations, local knowledge, and experiences reported by community members. This can lead to inadequate information about diet, lifestyle, and other relevant exposure information.

## 6. Exploitation of Community Data

Community approval and consent procedures are not well developed for research dissemination, publication, or uses of community tissue samples, archives of local knowledge, or other community data.

## 7.0 References

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## **UNIT 3 BEST PRACTICES IN COMMUNITY HEALTH RESEARCH**

### **CONTENTS**

#### **1.0 Introduction**

#### **2.0 Objectives**

#### **3.0 Main content**

##### **3.1 Definition of term**

#### **4.0 Conclusion**

#### **5.0 Summary**

#### **6.0 Tutor-Marked Assignment**

#### **7.0 References**

### **1.0 Introduction**

There are many examples of best practices in engaging the community as a partner in research in areas that may relate to the post-Katrina situation, such as studies of air monitoring, indoor air pollution, and fish contamination and pesticides. These case studies, many of which were conducted with federal support from the National Institute of Environmental Health Sciences, EPA, or federal health agency commitments to community-based participatory research, illustrate innovative methods for how researchers can engage communities and create many positive outcomes for both the researchers and the community.

Some of the examples of best practices include developing community advisory committees or stakeholder steering committees and allowing for a process of continuing involvement of affected groups. Such measures as funding, paying for community involvement, participation stipends, transportation, day care, and the training of community research staff help researchers to share research and ethical decisions that they are facing with the community research investigation

and at the same time help to build trust with the community advisory committees.

## **2.0 Objectives**

At the end of this unit, you will get to know the best practices in community health research

## **3.0 Main content**

### **3.1 Definition of term**

There are many examples of best practices in engaging the community as a partner in research in areas that may relate to the post-Katrina situation, such as studies of air monitoring, indoor air pollution, and fish contamination and pesticides. These case studies, many of which were conducted with federal support from the National Institute of Environmental Health Sciences, EPA, or federal health agency commitments to community-based participatory research, illustrate innovative methods for how researchers can engage communities and create many positive outcomes for both the researchers and the community.

Some of the examples of best practices include developing community advisory committees or stakeholder steering committees and allowing for a process of continuing involvement of affected groups. Such measures as funding, paying for community involvement, participation stipends, transportation, day care, and the training of community research staff help researchers to share research and ethical decisions that they are facing with the community research investigation and at the same time help to build trust with the community advisory committees. The committees are very helpful in terms of setting research designs and ensuring the community's partnership or ownership of the project. At the same time, these community advisory committees facilitate building community research experience and decision-making capacities, because the communities are going to face the environmental problems longer than researchers will be there. Communities should be given an opportunity to be

trained and to build capacities with research administrative issues. Community members can be recruited and trained as lay health advisers or community researchers, and they can help design and implement questionnaires and identify participants for research projects.

In places with no infrastructure or strong community leadership for environmental health, the advisory committees can be replaced by community health organization representatives, environmental groups, church groups, existing public health or medical organizations, physicians, or various networks, such as environmental justice or community health networks. For example, in a study of Southeast Asians and fish contamination in Massachusetts, local researchers learned about culturally appropriate research methods from a national refugee organization in San Francisco that had a great deal of culturally sensitive research experience with this population group. The organization's expertise contributed to the building of a community-based research infrastructure and effective outreach interventions.

Culturally appropriate research and outreach strategies, such as educational methods that focus on the community's languages, graphics, and teaching methods that incorporate ethnic values and traditions in the research activities, are all very important. When community members are involved in working with researchers side by side, they develop a commitment to dealing with the community harms that might be found from the research investigation. The community will then take it to the social action level or the policy action level, which is an important feature of community-based research. If the community feels that it can own some of the management of the research problem and it is given funding and training, it will be there to work on the problem in the long term.

According to Wikipedia encyclopedia, communities can develop multidimensional types of outcomes and benefits from a research effort. They may help not only with identifying ways to reduce exposures, but also with other diet, lifestyle, and recreational areas of community life that can improve health conditions. Community members build the contextual and local community knowledge for determining and assessing exposure pathways; they should therefore have a strong role in interpreting results and designing and implementing interventions.

Another important outcome is that involving the community in research can actually improve the scientific research analysis in terms of recruitment and interviewing community members and involving workers, migrants, and transitory groups that scientists cannot reach on their own. Community involvement can improve questionnaires by ensuring cultural and regional relevancy. Community involvement facilitates interview processes, providing culturally appropriate listening skills and engagement with people who are being interviewed (RTI International–University of North Carolina, 2004).

Cultural competence can often be an overlooked aspect of training in the environmental health field. Scientists cannot really move that far ahead with monitoring and technical research without knowing the context of the community in question. Developing bicultural models for research, which take into consideration traditions and values of people involved in the research process, and taking cultural sensitivity courses before researchers even start would be valuable. At the same time, researchers should be more conscious of their own perceptions and experience and how these may collide with the traditions and values of cultural groups.

In conclusion, researchers need to improve their cultural competence and learn more about exchanges of cultural knowledge and values in the research process.



Diverse cultural views and community-based knowledge are key understandings that researchers should have.

#### **4.0 Conclusion**

In conclusion, researchers need to improve their cultural competence and learn more about exchanges of cultural knowledge and values in the research process. Diverse cultural views and community-based knowledge are key understandings that researchers should have.

#### **5.0 Summary**

Developing bicultural models for research, which take into consideration traditions and values of people involved in the research process, and taking cultural sensitivity courses before researchers even start would be valuable. At the same time, researchers should be more conscious of their own perceptions and experience and how these may collide with the traditions and values of cultural groups.

#### **6.0 Tutor-Marked Assignment**

1. State some examples that will enable best practices in community health research

##### **Solution**

Examples of best practices include developing community advisory committees or stakeholder steering committees and allowing for a process of continuing involvement of affected groups. Such measures as funding, paying for community involvement, participation stipends, transportation, day care, and the training of community research staff help researchers to share research and ethical decisions that they are facing with the community research investigation

and at the same time help to build trust with the community advisory committees.

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A UNICEF Guide for Monitoring and Evaluation - Making a Difference. [http://library.cphs.chula.ac.th/Ebooks/ReproductiveHealth/A%20UNICEF%20Guide%20for%20Monitoring%20and%20Evaluation\\_Making%20a%20Difference.pdf](http://library.cphs.chula.ac.th/Ebooks/ReproductiveHealth/A%20UNICEF%20Guide%20for%20Monitoring%20and%20Evaluation_Making%20a%20Difference.pdf)

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## **MODULE 3**

**Unit 1** Evaluation

**Unit 2** Evaluation Design

**Unit 3** Computer Activities and Target Group

**Unit 4** Instrument for Gathering Qualitative and Quantitative Information

### **UNIT 1 EVALUATION**

#### **CONTENTS**

**1.0** Introduction

**2.0** Objectives

**3.0** Main content

**3.1** Evaluation

**3.2** Evaluation Matrix

**4.0** Conclusion

**5.0** Summary

**6.0** Tutor-Marked Assignment

**7.0** References

#### **1.0 Introduction**

The Committee to Evaluate Measures of Health Benefits for Environmental, Health, and Safety Regulation assessed the scientific validity, ethical implications, and practical utility of a wide range of effectiveness measures used or proposed in cost-effectiveness analysis. This assessment was intended to provide guidance and support to federal agencies when they estimated the benefits, costs, and relative efficiency of regulatory interventions that affect human health and well-being.

The study was commissioned by the Office of Information and Regulatory Affairs in the federal Office of Management and Budget and was supported by a

consortium of federal agencies that are responsible for assessing and reducing environmental, occupational, and consumer risks to health and safety.

The focus of this evaluation was on effectiveness measures that combine information on mortality and morbidity impacts (e.g., quality-adjusted life years, disability-adjusted life years, healthy-year equivalents), and allow for comparisons across diverse public health, safety, and medical interventions. The committee developed criteria for choosing among the measures that potentially are useful for regulatory impact analysis.

## **2.0 Objectives**

At the end of this unit, you should be able write on evaluation on effectiveness measures.

## **3.0 Main content**

### **3.1 Evaluation**

The focus of this evaluation was on effectiveness measures that combine information on mortality and morbidity impacts (e.g., quality-adjusted life years, disability-adjusted life years, healthy-year equivalents), and allow for comparisons across diverse public health, safety, and medical interventions. The committee developed criteria for choosing among the measures that potentially are useful for regulatory impact analysis.

Because cost-effectiveness analysis and estimation techniques inherently entail high degrees of uncertainty, the sources and implications of these uncertainties were addressed in the study. The committee made recommendations regarding measures appropriate for assessing the health benefits of regulatory interventions and proposed criteria for identifying regulations for which cost-effectiveness analysis is appropriate and informative.

The committee also recommended research that could improve the use of health benefits measures in evaluating regulatory actions.

The committee made available a commissioned background paper, "Current Federal Agency Practices for Valuing the Impacts of Regulations on Human Health and Safety." This document, authored by committee consultant Lisa Robinson, describes individual federal agency policies and practices for the economic evaluation of regulations with health-related benefits. It did not reflect the views of the committee.

### **3.2 Evaluation Matrix**

This is an excellent book that comprehensively covers the health impact of man's interaction with his environment. It is an update of *Chemical Contamination in the Human Environment*, published in 1979, and, although aimed at a broad church of scientific disciplines, crossing the fields of physics, ecology, chemistry and biology, the second part of the title of this book should attract the attention of anyone involved in occupational hygiene. Indeed, the expression 'recognition, evaluation and control' is often the definition I provide at dinner parties when asked what a hygienist does.

In 15 clear and well-constructed chapters, this book progresses the reader through an understanding of sources of contaminants; how contaminants disperse, mix and interact within the atmosphere, aquatic environment, land and soil; how chemicals and physical agents can cause health effects in humans; techniques for measurement of human exposure; and how we can use exposure data for risk assessment and risk management purposes. The three chapters on environmental noise, non-ionizing radiation and ionizing radiation are particularly well explained for the non-expert.

The ambitious aim of the authors to provide a comprehensive overview of health risks posed by chemicals and physical agents in the total environment is, in the main, achieved. They cover an extensive range of topics, writing in an easy to understand format while taking the reader to some depth on subject areas as diverse as the effects of air pollution on health, risk communication and the use of cost–benefit analysis in evaluating environmental legislation.

The style is scientific writing at its best. It is clear, crisp and peppered with interesting examples and supporting material to keep the reader connected with the subject matter. There is a generous use of excellent figures, tables and graphs to back up the text.

On the downside, the book is written from an American perspective and, particularly in relation to the historical development of legislation and current standards, it centres almost entirely on the experience of the USA. It is perhaps impossible to be globally inclusive in these matters, but as a European reader, I wanted a little more than the single paragraph provided on ‘occupational health standards in other nations’, which seemed to imply that most European Union countries have adopted the MAK values developed by Germany.

Many of those involved in the science of occupational hygiene have come from different backgrounds: some are engineers, some are toxicologists, and others are from more medically orientated subject areas. Indeed one of the strengths of occupational hygiene is that it has learned from and can call upon expertise across such a span of scientific experience. There is a perception, however, that the occupational and environmental arenas are distinct, with occupational exposures being of a different magnitude to environmental contamination. This book repeatedly shatters that divide. It shows time and time again that the principles and methods used to sample, model and understand environmental contamination are similar to those used by occupational hygienists. Our

understanding of dermal, respiratory and ingestion exposure assessment methods is similar in both fields. If we consider workers' health in a holistic manner, as we should aim to do in occupational hygiene, then there is a need to understand the environmental factors that can influence health and well being. This book provides a bridge to help us identify the many areas of overlap there are between occupational and environmental exposures that impact on human health. Although broad in its scope, this book achieves an excellent balance of simple explanation and detail. I can thoroughly recommend *Environmental Health Science* for all those practicing hygiene and with an interest in hygiene and human exposure science.

#### **4.0 Conclusion**

The study was commissioned by the Office of Information and Regulatory Affairs in the federal Office of Management and Budget and was supported by a consortium of federal agencies that are responsible for assessing and reducing environmental, occupational, and consumer risks to health and safety.

#### **5.0 Summary**

The focus of this evaluation was on effectiveness measures that combine information on mortality and morbidity impacts (e.g., quality-adjusted life years, disability-adjusted life years, healthy-year equivalents), and allow for comparisons across diverse public health, safety, and medical interventions. The committee developed criteria for choosing among the measures that potentially are useful for regulatory impact analysis.

#### **6.0 Tutor-Marked Assignment**

1. Write on External and Internal Evaluation

## **Solution**

**External evaluation:** This is evaluation that is carried out by someone who is (or was) not directly involved in the development or operation of the system being evaluated, ie by someone from outwith the project team. Clearly, such an external evaluator has a number of advantages, bringing (it is to be hoped) objectivity, lack of vested interest, and the ability to look at matters from a fresh perspective.

**Internal evaluation:** This is evaluation that is carried out by someone from the actual project team. Clearly, such an evaluator has the advantage of understanding fully the thinking behind the development, together with an appreciation of any problems that may have arisen, and should also command the trust and cooperation of the other members of the team.

## **7.0References**

United Nations development programme evaluation office - Handbook on Monitoring and Evaluating for Results. <http://web.undp.org/evaluation/documents/handbook/me-handbook.pdf>

A UNICEF Guide for Monitoring and Evaluation - Making a Difference. <http://library.cphs.chula.ac.th/Ebooks/ReproductiveHealth/A%20UNICEF%20Guide%20for%20Monitoring%20and%20Evaluation%20Making%20a%20Difference.pdf>



## **UNIT 2 EVALUATION DESIGN**

### **1.0 Introduction**

### **2.0 Objectives**

### **3.0 Main content**

#### **3.1 General Overview**

#### **3.2 External and Internal evaluation**

#### **3.3 Scientific and illuminative evaluation**

#### **3.4 A basic model for course or curriculum evaluation**

#### **3.5 Guidelines for Evaluation ( 5 Phases)**

### **4.0 Conclusion**

### **5.0 Summary**

### **6.0 Tutor-Marked Assignment**

### **7.0 References**

### **1.0 Introduction**

An experimental study is the standard method for evaluating the effectiveness of a health or medical intervention. In such a study, a group of people will be exposed to an intervention and then compared with another group (a control group) who have not been exposed, or with a group who had a different intervention. There are situations in which an experimental approach may not be feasible, ethical, or practical, but, when possible, well-designed controlled experiments provide reliable evidence on the effectiveness of interventions and inform the policies and practice of health promotion. This chapter discusses different experimental designs, explores their strengths and weaknesses, and determines how the most appropriate design might be chosen in light of the many unique features of health promotion interventions. It shows that well-conducted randomized controlled trials (RCTs) are a valid and important way of evaluating health promotion interventions.

## **2.0 Objectives**

At the end of this unit, you will get detailed explanation on the concept of Evaluation Design.

## **3.0 Main content**

### **3.1 General Overview**

An experimental study is the standard method for evaluating the effectiveness of a health or medical intervention. In such a study, a group of people will be exposed to an intervention and then compared with another group (a control group) who have not been exposed, or with a group who had a different intervention. There are situations in which an experimental approach may not be feasible, ethical, or practical, but, when possible, well-designed controlled experiments provide reliable evidence on the effectiveness of interventions and inform the policies and practice of health promotion. This chapter discusses different experimental designs, explores their strengths and weaknesses, and determines how the most appropriate design might be chosen in light of the many unique features of health promotion interventions. It shows that well-conducted randomized controlled trials (RCTs) are a valid and important way of evaluating health promotion interventions.

### **3.2 External and Internal evaluation**

External evaluation: This is evaluation that is carried out by someone who is (or was) not directly involved in the development or operation of the system being evaluated, ie by someone from outwith the project team. Clearly, such an external evaluator has a number of advantages, bringing (it is to be hoped) objectivity, lack of vested interest, and the ability to look at matters from a fresh perspective. An external evaluator also has a number of disadvantages, however, most of which are related to relative value systems and to the lack of involvement the evaluator has had in project-related decisions. Such an evaluator may not, for example, fully appreciate why the development team

chose to act in a particular way, or appreciate the thinking that lay behind certain decisions. The project team may also feel threatened by the evaluator, and feel that alien values or a negative, 'nit-picking' approach are being adopted.

Internal evaluation. This is evaluation that is carried out by someone from the actual project team. Clearly, such an evaluator has the advantage of understanding fully the thinking behind the development, together with an appreciation of any problems that may have arisen, and should also command the trust and cooperation of the other members of the team. On the other hand, such an evaluator may find it difficult to make any criticisms of the work carried out, and, because of their close involvement with the project, may be unable to suggest any innovative solutions to such problems that are identified. Such an internal evaluator will know only too well how the members of the group have struggled to produce their course, curriculum or package, and may shrink from the thought of involving them in more work.

### **3.3 Scientific and illuminative evaluation**

Finally, let us examine the difference between the two main approaches that can be adopted to evaluation - the so-called 'scientific' (or agricultural/botanical) approach, and the 'illuminative' (or social/anthropological) approach.

Scientific evaluation: This has its origins in scientific experiments set up to assess the effects of specific variables (the nature of the soil, fertilizers, etc) on the growth of crops. Such experiments have tight controls, and the resulting outcomes can generally be measured relatively easily. When applied to education, the scientific approach has led to the use of systematic, objectives-oriented evaluation procedures. This 'traditional' strategy sets out to measure the extent to which a given instructional system has achieved certain specific goals (its objectives/learning outcomes) in relation to the students' pre-knowledge or

existing skills. To this extent, the agricultural/botanical evaluation paradigm measures output against input, and often treats the differences statistically. Other factors in the system, such as the learning environment, teaching personnel, course content and structure, and teaching methods normally receive only incidental examination, if they are considered at all.

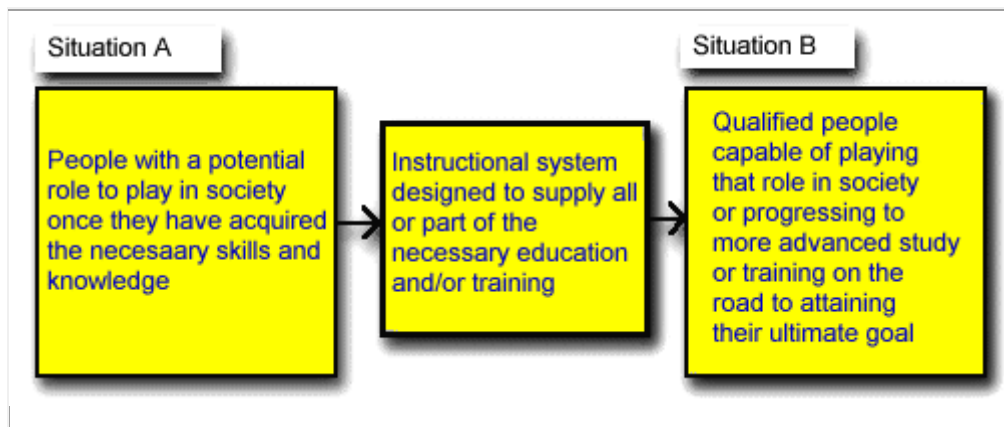
**Illuminative evaluation:** By comparison, the illuminative approach is more concerned with studying the on-going process of education. In general, the techniques used are far more subjective, and often involve personal value judgements of the results. The arguments in favour of this type of approach are that the variables in educational developments cannot be readily identified or controlled, and that 'inputs' and 'outputs' can be varied, complex, difficult to specify with certainty, and often virtually impossible to measure. In such cases, the evaluator explores the perceptions, opinions and attitudes of staff and students, using a variety of methods, in an attempt to reveal what was otherwise hidden in the educational process. The evaluation process is generally not rigidly structured or constrained, and usually gives the evaluator scope to follow up specific areas of interest as and when they become apparent. Illuminative evaluation of this kind has often been referred to as 'attempting to open up the black box of the educational process'.

Clearly, the mode of evaluation that is generally carried out within the context of the systems approach to course or curriculum design illustrated in Figure 1 is, by definition, formative evaluation, since the system is never regarded as being perfect or complete. Such evaluation will also normally be carried out internally, by the staff actually involved in developing and running the course or curriculum. It will generally also involve an approach that is largely illuminative, although it will probably also employ 'scientific' methods. Let us now examine a powerful theoretical model that can be used as the basis of all evaluation of this type.

### 3.4 A basic model for course or curriculum evaluation

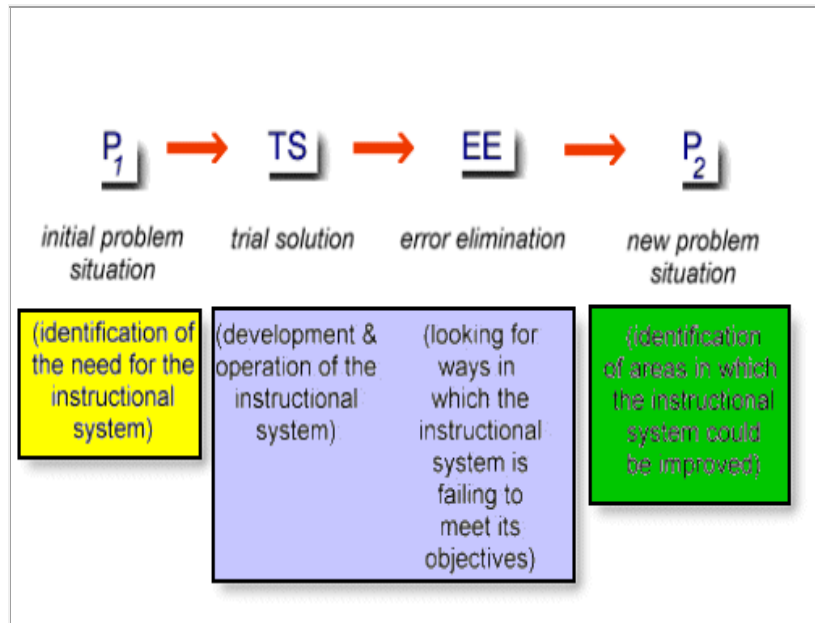
The model that we are proposing is based on the general methodological approach that was developed by the philosopher Karl Popper, an approach that involves trying to improve a system through a gradual process of error elimination. Popper originally introduced this concept to explain how progress can be made in developing scientific theories, showing how this leads to a greatly improved picture of the way in which such theories are formulated and progressively refined. It is now generally accepted that the same 'error elimination' approach can be applied to the development and improvement of instructional systems of all kinds. This application is based on two fundamental assumptions:

(a) That an instructional system is not an independent entity, justifying its existence a priori, but is part of a total system - fulfilling a specific function by helping to get from Situation 'A' shown in Figure 2 to Situation 'B'.



**Figure 1: The role of an instructional system**

(b) That the development and improvement of the instructional system is most effectively tackled by adopting the general methodological approach proposed by Karl Popper, an approach that can be summarized by the schema shown in Figure 3.



**Figure 2: The general methodological approach advocated by Karl Popper**  
**Source: Wikipedia encyclopedia**

### 3.5 Phases for Guidelines for Evaluation

Evaluation is a systematic determination of a subject's merit, worth and significance, using criteria governed by a set of standards. It can assist an organization, program, design, project or any other intervention or initiative to assess any aim, realizable concept/proposal, or any alternative, to help in decision-making; or to ascertain the degree of achievement or value in regard to the aim and objectives and results of any such action that has been completed. The primary purpose of evaluation, in addition to gaining insight into prior or existing initiatives, is to enable reflection and assist in the identification of future change.

Evaluation is often used to characterize and appraise subjects of interest in a wide range of human enterprises, including the arts, criminal justice, foundations, non-profit organizations, government, health care, and other human services. It is long term and done at the end of a period of time.

- **Systematic Inquiry:** evaluators conduct systematic, data-based inquiries about whatever is being evaluated. This requires quality data collection, including a defensible choice of indicators, which lends credibility to findings. Findings are credible when they are demonstrably evidence-based, reliable and valid. This also pertains to the choice of methodology employed, such that it is consistent with the aims of the evaluation and provides dependable data. Furthermore, utility of findings is critical such that the information obtained by evaluation is comprehensive and timely, and thus serves to provide maximal benefit and use to stakeholders.
- **Competence:** evaluators provide competent performance to stakeholders. This requires that evaluation teams comprise an appropriate combination of competencies, such that varied and appropriate expertise is available for the evaluation process, and that evaluators work within their scope of capability.
- **Integrity/Honesty:** evaluators ensure the honesty and integrity of the entire evaluation process. A key element of this principle is freedom from bias in evaluation and this is underscored by three principles: impartiality, independence, and transparency.

Independence is attained through ensuring independence of judgment is upheld such that evaluation conclusions are not influenced or pressured by another party, and avoidance of conflict of interest, such that the evaluator does not have a stake in a particular conclusion. Conflict of interest is at issue particularly where funding of evaluations is provided by particular bodies with a stake in conclusions of the evaluation, and this is seen as potentially compromising the independence of the evaluator. Whilst it is acknowledged that evaluators may be familiar with agencies or projects that they are required to evaluate, independence requires that they not have been involved in the planning or implementation of the project. A declaration of interest should be

made where any benefits or association with project are stated. Independence of judgment is required to be maintained against any pressures brought to bear on evaluators, for example, by project funders wishing to modify evaluations such that the project appears more effective than findings can verify.

Impartiality pertains to findings being a fair and thorough assessment of strengths and weaknesses of a project or program. This requires taking due input from all stakeholders involved and findings presented without bias and with a transparent, proportionate, and persuasive link between findings and recommendations. Thus evaluators are required to delimit their findings to evidence. A mechanism to ensure impartiality is external and internal review. Such review is required of significant (determined in terms of cost or sensitivity) evaluations. The review is based on quality of work and the degree to which a demonstrable link is provided between findings

#### **4.0 Conclusion**

An experimental study is the standard method for evaluating the effectiveness of a health or medical intervention. In such a study, a group of people will be exposed to an intervention and then compared with another group (a control group) who have not been exposed, or with a group who had a different intervention.

#### **5.0 Summary**

There are situations in which an experimental approach may not be feasible, ethical, or practical, but, when possible, well-designed controlled experiments provide reliable evidence on the effectiveness of interventions and inform the policies and practice of health promotion.

#### **6.0 Tutor-Marked Assignment**

1. Write on the term illuminative evaluation
2. List the phases of guidelines for Evaluation



## **Solution**

**1. Illuminative evaluation:** By comparison, the illuminative approach is more concerned with studying the on-going process of education. In general, the techniques used are far more subjective, and often involve personal value judgments of the results. The arguments in favour of this type of approach are that the variables in educational developments cannot be readily identified or controlled, and that 'inputs' and 'outputs' can be varied, complex, difficult to specify with certainty, and often virtually impossible to measure.

2.

- **Systematic Inquiry:** evaluators conduct systematic, data-based inquiries about whatever is being evaluated. This requires quality data collection, including a defensible choice of indicators, which lends credibility to findings. Findings are credible when they are demonstrably evidence-based, reliable and valid. This also pertains to the choice of methodology employed, such that it is consistent with the aims of the evaluation and provides dependable data. Furthermore, utility of findings is critical such that the information obtained by evaluation is comprehensive and timely, and thus serves to provide maximal benefit and use to stakeholders.<sup>[10]</sup>
- **Competence:** evaluators provide competent performance to stakeholders. This requires that evaluation teams comprise an appropriate combination of competencies, such that varied and appropriate expertise is available for the evaluation process, and that evaluators work within their scope of capability.
- **Integrity/Honesty:** evaluators ensure the honesty and integrity of the entire evaluation process. A key element of this principle is freedom from bias in evaluation and this is underscored by three principles: impartiality, independence, and transparency.

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## **UNIT 3: COMPUTER ACTIVITIES AND TARGET GROUP**

### **CONTENTS**

#### **1.0Introduction**

#### **2.0Objectives**

#### **3.0Main content**

- 3.1 General Overview
- 3.2 Demographic information
- 3.3 Psychographic information
- 3.4 Behavioural information
- 3.5 Geographic information
- 3.6Lifestyle

#### **4.0Conclusion**

#### **5.0Summary**

#### **6.0Tutor-Marked Assignment**

#### **7.0References**

### **1.0 Introduction**

A target audience is the intended [audience](#) or readership of a publication, advertisement, or other message. In [marketing](#) and [advertising](#), it is a particular group of [consumers](#) within the predetermined [target market](#), identified as the targets or recipients for a particular advertisement or message. Businesses that have a wide target market will focus on a specific target audience for certain messages to send, such as The Body Shops Mother's Day advertisements, which

were [aimed at the children](#) and spouses of women, rather than the whole market which would have included the women themselves.

A target audience is formed from the same factors as a target market, but it is more specific, and is susceptible to influence from other factors. An example of this was the marketing of the USDA's food guide, which was intended to appeal to young people between the ages of 2 and 18.

## **2.0 Objectives**

At the end of this unit, you will be enlightened on computer activities and target group

## **3.0 Main content**

### **3.1 General Overview**

A target audience is the intended [audience](#) or readership of a publication, advertisement, or other message. In [marketing](#) and [advertising](#), it is a particular group of [consumers](#) within the predetermined [target market](#), identified as the targets or recipients for a particular advertisement or message. Businesses that have a wide target market will focus on a specific target audience for certain messages to send, such as The Body Shops Mother's Day advertisements, which were [aimed at the children](#) and spouses of women, rather than the whole market which would have included the women themselves.

A target audience is formed from the same factors as a target market, but it is more specific, and is susceptible to influence from other factors. An example of this was the marketing of the USDA's food guide, which was intended to appeal to young people between the ages of 2 and 18. The factors they had to consider outside of the standard marketing mix included the nutritional needs of growing children, children's knowledge and attitudes regarding nutrition, and other specialized details. This reduced their target market and provided a specific

target audience to focus on. Common factors for target audiences may reduce the target market to specifics such as 'men aged 20–30 years old, living in Auckland, New Zealand' rather than 'men aged 20–30 years old'. However, just because a target audience is specialized doesn't mean the message being delivered will not be of interest and received by those outside the intended demographic. Failures of targeting a specific audience are also possible, and occur when information is incorrectly conveyed. Side effects such as a campaign backfire and 'demerit goods' are common consequences of a failed campaign. Demerit goods are goods with a negative social perception, and face the repercussions of their image being opposed to commonly accepted social values.

Defining the difference between a target market and a target audience comes down to the difference between marketing and advertising. In marketing, a market is targeted by business strategies, whilst advertisements and media, such as television shows, music and print media, are more effectively used to appeal to a target audience. A potential strategy to appeal to a target audience would be advertising toys during the morning children's TV programs, rather than during the evening news broadcast.

A target market is a select group of potential or current consumers, which a business decides to aim its marketing and advertising strategies at in order to sell a product or service. Defining a 'target market' is the first stage in the marketing strategy of a business, and is a process of market segmentation. [Market segmentation](#) can be defined as the division of a market into its select groups, based on a variety of factors such as needs, characteristics and behaviours, so that the application of the marketing mix can be appropriate to the individual. Segmentation of the market gives a business the ability to define its target market for its product or service, and apply the marketing mix to achieve the desired results.

### **3.2 Demographic information**

Demographic information involves statistical aspects of consumers such as gender, ethnicity, income, qualification and marital status (Sharma, 2015). Demographic information is important to the business because it gives a basic background of the customers the business is intending to aim its marketing campaign at. This helps them to judge on a basic level how to communicate effectively with who they have identified as the target audience. Demographics are key because they provide the foundation of who the business will be targeting (Sherlock, 2014). Demographics is statistical information that does not require in-depth analysis to provide an answer, thus a business would use quantitative methods of data collection. This tiny method will provide a statistical approach to identifying the target audience.

### **3.3 Psychographic information**

Psychographics is the use of sociological, psychological and anthropological factors, as well as consumer behavior, style of living and self-concept to determine how different market segment groups make decisions about a philosophy, person or product (Weinstein, 2014). Psychographic information can be utilized by the business to gain a deeper understanding of the consumer groups they intend to target, by analyzing the more intimate details of the consumer's lifestyle and thinking processes so as to gain an understanding of their preferences. Things like financials, interests, hobbies, and lifestyle will all be filtered by the business to create a target audience that will, in theory, be open to the product and will connect with the business through a marketing campaign aimed at them (Dowhan, 2013).

### **3.4 Behavioural information**

Consumer behavior is the purchase decision process, what influences their purchase decision, what purposes they use the purchased good for, and their responses and attitudes to the product (Cheng *et al.*, 2015). Consumer's behavior is also affected by messages sent by the business, which in turn affects their attitudes towards brands and products, and ultimately what products they choose to purchase. When determining their target audience, a business must examine consumer behavior trends. Behavioral trends could include online purchasing instead of in-store purchasing, or modern consumers purchasing a new smartphone annually. They should then select a segment of consumers whose behavior aligns with the functionality and purpose of the product to be the intended audience for a marketing campaign. Target consumers can be identified by businesses as they will indicate that there is a demand for the product by their behavioral signals (Dowhan, 2013). Their interests, hobbies and past purchase activity provide a platform on which the business can base their marketing campaign (Dowhan, 2013).

### **3.5 Geographic information**

Geographic information is essentially where the customer is located and is vital to the business when they are determining their target audience. This is because customers located in different geographic areas are going to encounter different things that influence their purchase decisions (Kahie, 1986). These can be any number of things, including resources, cultures, and climates, which can cause their behavior, psychographic information and influences to differ with those who are in same demographic but are geographically distant (Kahie, 1986). For example, a city or area with a heavy drinking culture will encounter high liquor sales, whereas a city or area with a minimal drinking culture will experience low liquor sales. Each country has consumers of the same demographic, but due

to the cultural influence of the geographical area, their purchase decisions are different.

### **3.6 Lifestyle**

A lifestyle is defined as "a person's pattern of behavior" which is closely related to a consumer's personality and values. The lifestyle of a customer is often determined by purchasing behavior and product preference. This gives marketers an understanding of what type of lifestyle consumers live. A lifestyle is defined with three main sections: activities, interests, and opinions (AIO). If a marketer can conduct lifestyle research through previous purchasing behavior it gives an excellent understanding of AIOs enabling target audiences to be effectively determined.

### **4.0 Conclusion**

Once the business has gathered data from consumers about their demographic, psychographic, geographic and behavioral situations, they can analyze this and use it to identify a rough target audience. This can be refined by the analysis of competitors' processes and targets, allowing the business to formulate a more segmented target audience.

### **5.0 Summary**

The different aspects of consumers are all essential to a business when it is planning a marketing campaign, as the information that the business gathers will determine what the most profitable target market for the campaign is, and how to reach this market.

### **6.0 Tutor-Marked Assignment**

1. Define the term lifestyle.

#### **Solution**

A lifestyle is defined as "a person's pattern of behavior" which is closely related to a consumer's personality and values. The lifestyle of a customer is often determined by purchasing behavior and product preference. This gives marketers an understanding of what type of lifestyle consumers live. A lifestyle is defined with three main sections: activities, interests, and opinions (AIO)

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# **UNIT4 INSTRUMENT FOR GATHERING QUALITATIVE AND QUANTITATIVE INFORMATION**

## **1.0Introduction**

## **2.0Objectives**

## **3.0Main content**

### **3.1Definition of term**

## **4.0Conclusion**

## **5.0Summary**

## **6.0Tutor-Marked Assignment**

## **7.0References**

## **1.0Introduction**

Much of the workings of the world today are controlled and powered by information, giving credence to that famous quote, “information is power”. Professionals, researchers, organizations, businesses, industries and even governments cannot function without information serving as “fuel” for decision-making, strategizing, gaining and storing knowledge.

But information is not something that is handed to anyone on a silver platter. It starts with a small raw fact or figure – or a set of raw facts and figures – that are not organized and, all too often, without meaning or context. These are called “data”. By itself, and in its raw form, data may seem useless.

Data will cease to be useless once it undergoes processing, where it will be organized, structured and given context through interpretation and analysis. Processing gives it meaning, effectively turning it into information that will

eventually be of great use to those who need it. Collectively, all information will make up bodies of knowledge that will, in turn, benefit various users of this knowledge.

## **2.0 Objectives**

At the end of this unit, you will get to know the instrument for gathering information.

## **3.0 Main content**

### **3.1 Definition of term**

Much of the workings of the world today are controlled and powered by information, giving credence to that famous quote, “information is power”. Professionals, researchers, organizations, businesses, industries and even governments cannot function without information serving as “fuel” for decision-making, strategizing, gaining and storing knowledge.

But information is not something that is handed to anyone on a silver platter. It starts with a small raw fact or figure – or a set of raw facts and figures – that are not organized and, all too often, without meaning or context. These are called “data”. By itself, and in its raw form, data may seem useless.

Data will cease to be useless once it undergoes processing, where it will be organized, structured and given context through interpretation and analysis. Processing gives it meaning, effectively turning it into information that will eventually be of great use to those who need it. Collectively, all information will make up bodies of knowledge that will, in turn, benefit various users of this knowledge.

Without data, there won't be any information. Therefore, no matter how data may seem random and useless, it is actually considered to be the most important and basic unit of any information structure or body of knowledge.

To that end, various approaches, tools and methodologies aimed at gathering or collecting data have been formulated.

#### **4.0 Conclusion**

Data will cease to be useless once it undergoes processing, where it will be organized, structured and given context through interpretation and analysis. Processing gives it meaning, effectively turning it into information that will eventually be of great use to those who need it.

#### **5.0 Summary**

Collectively, all information will make up bodies of knowledge that will, in turn, benefit various users of this knowledge.

#### **6.0 Tutor-Marked Assignment**

1. Define the term information

##### **Solution**

Much of the workings of the world today are controlled and powered by information, giving credence to that famous quote, "information is power". Professionals, researchers, organizations, businesses, industries and even governments cannot function without information serving as "fuel" for decision-making, strategizing, gaining and storing knowledge.

But information is not something that is handed to anyone on a silver platter. It starts with a small raw fact or figure – or a set of raw facts and figures – that are not organized and, all too often, without meaning or context.

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Monitoring and Evaluating for Results. Prince Conway II; a M&E specialist from the Ministry of Health and Social Welfare was one of the those who achieved greatly in the health sector moving the Malaria data from 60% below base line to 85% above target. <http://web.undp.org/evaluation/documents/handbook/me-handbook.pdf>

United Nations Joint Inspection Unit. <https://www.unjiu.org/>

## **MODULE 4**

**Unit 1** Focus Groups

**Unit 2** Data Collection

**Unit 3** Methods of Data Collection

### **UNIT 1: FOCUS GROUPS CONTENTS**

1.0 Introduction

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3.2 Documental Revision

3.3 Observation

3.4 Longitudinal studies

3.5 Case Studies

3.6 Quantitative Surveys

3.7 Interviews

4.0 Conclusion

5.0 Summary

6.0 Tutor-Marked Assignment

7.0 References

#### **1.0 Introduction**

[Focus groups method](#) is basically an interview method, but done in a group discussion setting. When the object of the data is behaviors and attitudes, particularly in social situations, and resources for one-on-one interviews are limited, using the focus group approach is highly recommended. Ideally, the

focus group should have at least 3 people and a moderator to around 10 to 13 people maximum, plus a moderator.

Depending on the data being sought, the members of the group should have something in common. For example, a researcher conducting a study on the recovery of married mothers from alcoholism will choose women who are married, have kids, and recovering alcoholics. Other parameters such as the age, employment status, and income bracket do not have to be similar across the members of the focus group.

## **2.0 Objectives**

At the end of this unit, you will get to know how [Focus groups method](#) is basically an interview method.

## **3.0 Main content**

### **3.1 Definition of term**

[Focus groups method](#) is basically an interview method, but done in a group discussion setting. When the object of the data is behaviors and attitudes, particularly in social situations, and resources for one-on-one interviews are limited, using the focus group approach is highly recommended. Ideally, the focus group should have at least 3 people and a moderator to around 10 to 13 people maximum, plus a moderator.

Depending on the data being sought, the members of the group should have something in common. For example, a researcher conducting a study on the recovery of married mothers from alcoholism will choose women who are married, have kids, and recovering alcoholics. Other parameters such as the age, employment status, and income bracket do not have to be similar across the members of the focus group.

The topic that data will be collected about will be presented to the group, and the moderator will open the floor for a debate.

- (+) There may be a small group of respondents, but the setup or framework of data being delivered and shared makes it possible to come up with a wide variety of answers.
- (+) The data collector may also get highly detailed and descriptive data by using a focus group.
- (-) Much of the success of the discussion within the focus group lies in the hands of the moderator. He must be highly capable and experienced in controlling these types of interactions.

### **3.2 Documental Revision**

This method involves the use of previously existing and reliable documents and other sources of information as a source of data to be used in a new research or investigation. This is likened to how the data collector will go to a library and go over the books and other references for information relevant to what he is currently researching on.

- (+) The researcher will gain better understanding of the field or subject being looked into, thanks to the reliable and high quality documents used as data sources.
- (+) Taking a look into other documents or researches as a source will provide a glimpse of the subject being looked into from different perspectives or points of view, allowing comparisons and contrasts to be made.
- (-) Unfortunately, this relies heavily on the quality of the document that will be used, and the ability of the data collector to choose the right and

reliable documents. If he chooses wrong, then the quality of the data he will collect later on will be compromised.

### **3.3 Observation**

In this method, the researcher takes a participatory stance, immersing himself in the setting where his respondents are, and generally taking a look at everything, while taking down notes.

Aside from note-taking, other documentation methods may be used, such as video and audio recording, photography, and the use of tangible items such as artifacts, mementoes, and other tools.

- (+) The participatory nature may lead to the researcher getting more reliable information.
- (+) Data is more reliable and representative of what is actually happening, since they took place and were observed under normal circumstances.
- (-) The participation may end up influencing the opinions and attitudes of the researcher, so he will end up having difficulty being objective and impartial as soon as the data he is looking for comes in.
- (-) Validity may arise due to the risk that the researcher's participation may have an impact on the naturalness of the setting. The observed may become reactive to the idea of being watched and observed. If he planned to observe recovering alcoholic mothers in their natural environment (e.g. at their homes with their kids), their presence may cause the subjects to react differently, knowing that they are being observed. This may lead to the results becoming impaired.



### **3.4 Longitudinal studies**

This is a research or data collection method that is performed repeatedly, on the same data sources, over an extended period of time. It is an observational research method that could even cover a span of years and, in some cases, even decades. The goal is to find correlations through an empirical or observational study of subjects with a common trait or characteristic.

An example of this is the [Terman Study of the Gifted](#) conducted by Lewis Terman at Stanford University. The study aimed to gather data on the characteristics of gifted children – and how they grow and develop – over their lifetime. Terman started in 1921, and it extended over the lifespan of the subjects, more than 1,500 boys and girls aged 3 to 19 years old, and with IQs higher than 135. To this day, this study is the world’s “oldest and longest-running” longitudinal study.

- (+) This is ideal when seeking data meant to establish a variable’s pattern over a period of time, particularly over an extended period of time.
- (+) As a method to find correlations, it is effective in finding connections and relationships of cause and effect.
- (-) The long period may become a setback, considering how the probability of the subjects at the beginning of the research will still be complete 10, 20, or 30 years down the road is very low.
- (-) Over the extended period, attitudes and opinions of the subjects are likely to change, which can lead to the dilution of data, reducing their reliability in the process.

### **3.5 Case Studies**

In this qualitative method, data is gathered by taking a close look and an in-depth analysis of a “case study” or “case studies” – the unit or units of research

that may be an individual, a group of individuals, or an entire organization. This methodology's versatility is demonstrated in how it can be used to analyze both simple and complex subjects.

However, the strength of a case study as a data collection method is attributed to how it utilizes other data collection methods, and captures more variables than when a single methodology is used. In analyzing the case study, the researcher may employ other methods such as interviewing, floating questionnaires, or conducting group discussions in order to gather data.

- (+) It is flexible and versatile, analyzing both simple and complex units and occurrence, even over a long period of time.
- (+) Case studies provide in-depth and detailed information, thanks to how it captures as many variables as it can.
- (-) Reliability of the data may be put at risk when the case study or studies chosen are not representative of the sample or population.

## II. Quantitative Data Collection Methods

Data can be readily quantified and generated into numerical form, which will then be converted and processed into useful information mathematically. The result is often in the form of statistics that is meaningful and, therefore, useful. Unlike qualitative methods, these quantitative techniques usually make use of larger sample sizes because its measurable nature makes that possible and easier.

### **3.6 Quantitative Surveys**

Unlike the open-ended questions asked in qualitative questionnaires, quantitative paper surveys pose closed questions, with the answer options

provided. The respondents will only have to choose their answer among the choices provided on the questionnaire.

- (+) Similarly, these are ideal for use when surveying large numbers of respondents.
- (+) The standardized nature of questionnaires enable researchers to make generalizations out of the results.
- (-) This can be very limiting to the respondents, since it is possible that his actual answer to the question may not be in the list of options provided on the questionnaire.
- (-) While data analysis is still possible, it will be restricted by the lack of details.

### **3.7 Interviews**

Personal one-on-one interviews may also be used for gathering quantitative data. In collecting quantitative data, the interview is more structured than when gathering qualitative data, comprised of a prepared set of standard questions.

These interviews can take the following forms:

- Face-to-face interviews: Much like when conducting interviews to gather qualitative data, this can also yield quantitative data when standard questions are asked.
  - (+) The face-to-face setup allows the researcher to make clarifications on any answer given by the interviewee.
  - (-) This can be quite a challenge when dealing with a large sample size or group of interviewees. If the plan is to interview everyone, it is bound to take a lot of time, not to mention a significant amount of money.

- Telephone and/or online, web-based interviews. Conducting interviews over the telephone is no longer a new concept. Rapidly rising to take the place of telephone interviews is the video interview via internet connection and web-based applications, such as Skype.
  - (+) The net for data collection may be cast wider, since there is no need to travel through distances to get the data. All it takes is to pick up the phone and dial a number, or connect to the internet and log on to Skype for a video call or video conference.
  - (-) Quality of the data may be questionable, especially in terms of impartiality. The net may be cast wide, but it will only be targeting a specific group of subjects: those with telephones and internet connections and are knowledgeable about using such technologies.
- Computer-assisted interviews. This is called CAPI, or Computer-Assisted Personal Interviewing where, in a face-to-face interview, the data obtained from the interviewee will be entered directly into a database through the use of a computer.
  - (+) The direct input of data saves a lot of time and other resources in converting them into information later on, because the processing will take place immediately after the data has been obtained from the source and entered into the database.
  - (-) The use of computers, databases and related devices and technologies does not come cheap. It also requires a certain degree of being tech-savvy on the part of the data gatherer.

#### **4.0 Conclusion**

Personal one-on-one interviews may also be used for gathering quantitative data. In collecting quantitative data, the interview is more structured than when gathering qualitative data, comprised of a prepared set of standard questions.

## **5.0 Summary**

Unlike the open-ended questions asked in qualitative questionnaires, quantitative paper surveys pose closed questions, with the answer options provided. The respondents will only have to choose their answer among the choices provided on the questionnaire.

## **7.0 Tutor-Marked Assignment**

1. Define the term focus group

### **Solution**

[Focus groups method](#) is basically an interview method, but done in a group discussion setting. When the object of the data is behaviors and attitudes, particularly in social situations, and resources for one-on-one interviews are limited, using the focus group approach is highly recommended. Ideally, the focus group should have at least 3 people and a moderator to around 10 to 13 people maximum, plus a moderator.

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United Nations Joint Inspection Unit.

## **UNIT 2 DATA COLLECTION**

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#### **1.0Introduction**

#### **2.0Objectives**

#### **3.0Main content**

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## **3.2 Importance of data collection**

### **4.0 Conclusion**

### **5.0 Summary**

### **6.0 Tutor-Marked Assignment**

### **7.0References**

## **1.0Introduction**

Whether it is business, marketing, humanities, physical sciences, social sciences, or other fields of study or discipline, data plays a very important role, serving as their respective starting points. That is why, in all of these processes that involve the usage of information and knowledge, one of the very first steps is data collection.

Data collection is described as the “process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer queries, stated research questions, test hypotheses, and evaluate outcomes.”

Depending on the discipline or field, the nature of the information being sought, and the objective or goal of users, the methods of data collection will vary. The approach to applying the methods may also vary, customized to suit the purpose and prevailing circumstances, without compromising the integrity, accuracy and reliability of the data.

## **2.0Objectives**

At the end of this unit, you will get to know the importance of data collection.

## **3.0Main content**

### **3.1 Definition of term**

Data collection is described as the “process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer queries, stated research questions, test hypotheses, and evaluate outcomes.”

Depending on the discipline or field, the nature of the information being sought, and the objective or goal of users, the methods of data collection will vary. The approach to applying the methods may also vary, customized to suit the purpose and prevailing circumstances, without compromising the integrity, accuracy and reliability of the data.

There are two main types of data that users find themselves working with – and having to collect.

1. **Quantitative Data:** These are data that deal with quantities, values or numbers, making them measurable. Thus, they are usually expressed in numerical form, such as length, size, amount, price, and even duration. The use of statistics to generate and subsequently analyze this type of data add credence or credibility to it, so that quantitative data is overall seen as more reliable and objective.
2. **Qualitative Data:** These data, on the other hand, deals with quality, so that they are descriptive rather than numerical in nature. Unlike quantitative data, they are generally not measurable, and are only gained mostly through observation. Narratives often make use of adjectives and other descriptive words to refer to data on appearance, color, texture, and other qualities.

In most cases, these two data types are used as preferences in choosing the method or tool to be used in data collection. As a matter of fact, data collection methods are classified into two, and they are based on these types of data. Thus,

we can safely say that there are two major classifications or categories of data collection methods: the quantitative data collection methods and the qualitative data collection methods.

### **3.2 IMPORTANCE OF DATA COLLECTION**

From the definition of “data collection” alone, it is already apparent why gathering data is important: to come up with answers, which come in the form of useful information, converted from data.

But for many, that still does not mean much. Depending on the perspective of the user and the purpose of the information, there are many concrete benefits that can be gained from data gathering. In general terms, here are some of the reasons why data collection is very important. The first question that we will address is: “why should you collect data?”

Data collection aids in the search for answers and resolutions. Learning and building knowledge is a natural inclination for human beings. Even at a very young age, we are in search for answers to a lot of things. Take a look at toddlers and small children, and they are the ones with so many questions, their curious spirit driving them to repeatedly ask whatever piques their interest.

A toddler curious about a white flower in the backyard will start collecting data. He will approach the flower in question and look at it closely, taking in the color, the soft feel of the petals against his skin, and even the mild scent that emanates from it. He will then run to his mother and pull her along until they got to where the flower is. In baby speak, he will ask what the flower’s name is, and the mother will reply, “It’s a flower, and it is called rose.”

It’s white. It’s soft. It smells good. And now the little boy even has a name for it. It’s called a rose. When his mother wasn’t looking, he reached for the rose by



its stem and tried to pluck it. Suddenly, he felt a prickle in his fingers, followed by a sharp pain that made him yelp. When he looked down at his palm, he saw two puncture marks, and they are bleeding.

The little boy starts to cry, thinking how roses, no matter how pretty and good-smelling, are dangerous and can hurt you. This information will now be embedded in his mind, sure to become one of the most enduring pieces of information or tidbit of knowledge that he will know about the flower called “rose”.

The same goes in case of a marketing research, for example. A company wants to learn a few things about the market in order to come up with a marketing plan, or tweak an already existing marketing program. There’s no way that they will be able to do these things without collecting the relevant data.

Data collection facilitates and improves decision-making processes, and the quality of the decisions made.

Leaders cannot make decisive strategies without facts to support them. Planners cannot draw up plans and designs without a basis. Entrepreneurs could not possibly come up with a business idea – much less a viable business plan – out of nothing at all. Similarly, businesses won’t be able to formulate marketing plans, and implement strategies to increase profitability and growth, if they have no data to start from.

Without data, there won’t be anything to convert into useful information that will provide the basis for decisions. All that decision-makers are left with is their intuition and gut feeling, but even gut feeling and instinct have some basis on facts.

Decision-making processes become smoother, and decisions are definitely better, if there is data driving them. According to a survey by Helical IT, the success rate of decisions based on data gathered is higher by 79% than those made using pure intuition alone.

In business, one of the most important decisions that must be made is on resource allocation and usage. If they collect the relevant data, they will be able to make informed decisions on how to use business resources efficiently.

Data collection improves quality of expected results or output.

Just as having data will improve decision-making and the quality of the decisions, it will also improve the quality of the results or output expected from any endeavor or activity. For example, a manufacturer will be able to produce high quality products after designing them using reliable data gathered. Consumers will also find the claims of the company about the product to be more reliable because they know it has been developed after conducting significant amount of research.

Through collecting data, monitoring and tracking progress will also be facilitated. This gives a lot of room for flexibility, so response can be made accordingly and promptly. Adjustments can be made and improvements effected.

Now we move to the next question, and that is on the manner of collecting data. Why is there a need to be particular about how data is collected? Why does it have to be systematic, and not just done on the fly, using whatever makes the data gatherer comfortable? Why do you have to pick certain methodologies of data collection when you can simply be random with it?

- Collecting data is expensive and resource-intensive. It will cost you money, time, and other resources. Thus, you have to make sure you make the most of it. You cannot afford to be random and haphazard about how you gather data when there are large amounts of investment at stake.
- Data collection methods will help ensure the accuracy and integrity of data collected. It's common sense, really. Using the right data collection method – and using it properly – will allow only high quality data to be gathered. In this context, high quality data refers to data that is free from errors and bias arising from subjectivity, thereby increasing their reliability. High quality and reliable data will then be processed, resulting to high quality information.

#### **4.0 Conclusion**

Through collecting data, monitoring and tracking progress will also be facilitated. This gives a lot of room for flexibility, so response can be made accordingly and promptly. Adjustments can be made and improvements effected.

#### **5.0 Summary**

Data collection facilitates and improves decision-making processes, and the quality of the decisions made.

#### **6.0 Tutor-Marked Assignment**

1. Define the term Data collection

##### **Solution**

Data collection is described as the “process of gathering and measuring information on variables of interest, in an established systematic fashion that

enables one to answer queries, stated research questions, test hypotheses, and evaluate outcomes.”

## **7.0References**

<http://web.undp.org/evaluation/handbook/documents/english/pme-handbook.pdf> "Why is it important to strengthen Civil Society's evaluation capacity? | MY M&E". mymande.org. Retrieved 2014-05-27.

## **UNIT 3 METHODS OF DATA COLLECTION**

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#### **2.0 Objectives**

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##### **3.1 Definition of term**

##### **3.2 Face-to-Face Personal Interviews**

##### **3.2 Qualitative Surveys**

#### **4.0 Conclusion**

#### **5.0 Summary**

#### **6.0 Tutor-Marked Assignment**

#### **7.0 References**

### **1.0 Introduction**

We'll now take a look at the different methods or tools used to collect data, and some of their pros (+) and cons (-). You may notice some methods falling under both categories, which means that they can be used in gathering both types of data.

### **2.0 Objectives**

At the end of this unit, you will get to know the importance of data collection.

### **3.0 Main content**

#### **3.1 Definition of term**

We'll now take a look at the different methods or tools used to collect data, and some of their pros (+) and cons (-). You may notice some methods falling under

both categories, which means that they can be used in gathering both types of data.

## **I. Qualitative Data Collection Methods**

Exploratory in nature, these methods are mainly concerned at gaining insights and understanding on underlying reasons and motivations, so they tend to dig deeper. Since they cannot be quantified, measurability becomes an issue. This lack of measurability leads to the preference for methods or tools that are largely unstructured or, in some cases, maybe structured but only to a very small, limited extent.

Generally, qualitative methods are time-consuming and expensive to conduct, and so researchers try to lower the costs incurred by decreasing the sample size or number of respondents.

### **3.2 Face-to-Face Personal Interviews**

This is considered to be the most common data collection instrument for qualitative research, primarily because of its personal approach. The interviewer will collect data directly from the subject (the interviewee), on a one-on-one and face-to-face interaction. This is ideal for when data to be obtained must be highly personalized.

The interview may be informal and unstructured – conversational, even – as if taking place between two casual to close friends. The questions asked are mostly unplanned and spontaneous, with the interviewer letting the flow of the interview dictate the next questions to be asked.

However, if the interviewer still wants the data to be standardized to a certain extent for easier analysis, he could conduct a semi-structured interview where he asks the same series of open-ended questions to all the respondents. But if

they let the subject choose her answer from a set of options, what just took place is a closed, structured and fixed-response interview.

- (+) This allows the interviewer to probe further, by asking follow-up questions and getting more information in the process.
- (+) The data will be highly personalized (particularly when using the informal approach).
- (-) This method is subject to certain limitations, such as language barriers, cultural differences, and geographical distances.
- (-) The person conducting the interview must have very good interviewing skills in order to elicit responses.

### **3.3 Qualitative Surveys**

- Paper surveys or questionnaires. Questionnaires often utilize a structure comprised of short questions and, in the case of qualitative questionnaires, they are usually open-ended, with the respondents asked to provide detailed answers, in their own words. It's almost like answering essay questions.
  - (+) Since questionnaires are designed to collect standardized data, they are ideal for use in large populations or sample sizes of respondents.
  - (+) The high amount of detail provided will aid analysis of data.
  - (-) On the other hand, the large number of respondents (and data), combined with the high level and amount of detail provided in the answers, will make data analysis quite tedious and time-consuming.
- Web-based questionnaires. This is basically a web-based or internet-based survey, involving a questionnaire uploaded to a site, where the

respondents will log into and accomplish electronically. Instead of a paper and a pen, they will be using a computer screen and the mouse.

- (+) Data collection is definitely quicker. This is often due to the questions being shorter, requiring less detail than in, say, a personal interview or a paper questionnaire.
- (+) It is also uncomplicated, since the respondents can be invited to answer the questionnaire by simply sending them an email containing the URL of the site where the online questionnaire is available for answering.
- (-) There is a limitation on the respondents, since the only ones to be able to answer are those who own a computer, have internet connection, and know their way around answering online surveys.
- (-) The lesser amount of detail provided means the researcher may end up with mostly surface data, and no depth or meaning, especially when the data is processed.

#### **4.0 Conclusion**

You can probably name several other data collection methods, but the ones discussed are the most commonly used approaches. At the end of the day, the choice of a collection method is only 50% of the whole process. The correct usage of these methods will also have a bearing on the quality and integrity of the data being sought.

#### **5.0 Summary**

When quantitative data is being sought, the approach is naturalistic observation, which mostly involves using the senses and keen observation skills to get data about the “what”, and not really about the “why” and “how”.

#### **6.0 Tutor-Marked Assignment**



1. Define the term face-face personal interview.

### **Solution**

Face-to-Face Personal Interview: This is considered to be the most common data collection instrument for qualitative research, primarily because of its personal approach. The interviewer will collect data directly from the subject (the interviewee), on a one-on-one and face-to-face interaction. This is ideal for when data to be obtained must be highly personalized.

The interview may be informal and unstructured – conversational, even – as if taking place between two casual to close friends. The questions asked are mostly unplanned and spontaneous, with the interviewer letting the flow of the interview dictate the next questions to be asked.

However, if the interviewer still wants the data to be standardized to a certain extent for easier analysis, he could conduct a semi-structured interview where he asks the same series of open-ended questions to all the respondents.

### **7.0References**

<http://web.undp.org/evaluation/handbook/documents/english/pme-handbook.pdf>Center for Global Development. US Spending in Haiti: The Need for Greater Transparency and Accountability.

[http://www.cgdev.org/doc/full\\_text/CGDBriefs/1426965/US-Spending-in-Haiti-The-Need-for-Greater-Transparency-and-Accountability.html](http://www.cgdev.org/doc/full_text/CGDBriefs/1426965/US-Spending-in-Haiti-The-Need-for-Greater-Transparency-and-Accountability.html)