FEMA

R0378

Dear National Fire Academy Student:

By now you should have received an email notification from the National Emergency Training Center (NETC) Admissions Office. This notification indicates your acceptance into the U.S. Fire Administration (USFA), National Fire Academy (NFA) "Demonstrating Your Community Risk Reduction Program's Worth" (DYCRRPW) course.

Congratulations on being accepted into the USFA's/NFA's DYCRRPW class.

The purpose of this six-day course is to empower you with the knowledge, skills and abilities to evaluate existing community risk-reduction programs. It also teaches best practices for designing an action/evaluation plan for new programs. Both processes utilize a systematic method to improve and account for evaluation actions by involving procedures that are useful, feasible, ethical and accurate.

The main themes of the course:

- Correct misconceptions regarding the purposes and methods of evaluation.

- Understand that good evaluation is a step-by-step methodical process.

- Discover that evaluation begins the moment an idea for a risk-reduction program occurs and continues throughout its lifespan.

The DYCRRPW course is appropriate for anyone in the emergency services who has the responsibility for evaluating the effectiveness of a community risk-reduction program. This includes officers, fire marshals, community risk-reduction practitioners, building inspectors, etc.

As part of the DYCRRPW experience, you will be performing two major tasks: (1.) Designing or enhancing an evaluation strategy for an existing community risk-reduction program that your department currently offers. (2.) Developing an action/evaluation plan for a proposed community risk-reduction program your organization is considering for development.

To prepare for the course, you will need to conduct research into the community risk-reduction programs currently offered by your department and something new your organization may wish to offer in the future. A two-part pre-course assignment is explained later in this correspondence. Please note that the pre-course assignment is worth one-third of your NFA grade so be sure to follow the directions carefully. You should word process the assignment and present it in a binder to instructors the first morning of class. A grading rubric of how you will be evaluated on the assignment is included. Finally, please read the material entitled Evaluation 101 that is found after the pre-course assignment.

This is a six-day class which starts on Sunday at 8 a.m. Subsequent classes will meet daily from 8 a.m. to 5 p.m., with evening classes possible.

The course materials for this course are now available in a Bring Your Own Device (BYOD) format which will function on any electronic device. If you own an electronic device (laptop computer, tablet, etc.) and are familiar with its document reader functions, we are asking you to download the Student Manual (SM) **before you travel to Emmitsburg** and bring the preloaded device with you. Please see the page following this letter for complete instructions on successfully downloading your course materials. Please note: If you plan to bring/use an iPad, you may experience issues saving/storing/printing course assignments since there is no USB/thumb drive capacity for these devices.

The NFA classroom environment is computer based. Increased numbers of students and instructors are bringing laptop computers or other electronic devices to campus; you are responsible for the security and maintenance of your equipment. The NFA cannot provide computer software, hardware (which includes disks, printers, scanners, monitors, etc.) or technical support for your device. For your convenience, we do provide surge protector power strips at each classroom table.

Should you need to access the Student Computer Lab, it is located in Building D and is available for all students to use. The lab is open daily with a technician available Monday through Thursday from 1700 to 2100 (5 p.m. to 9 p.m.) and on Saturdays from 0800 to 1200 (8 a.m. to noon). The lab uses Windows 7 and Office 2013 as the software standard.

If you need additional information related to the course content or requirements, please contact Mr. Michael Weller, Fire Prevention Public Education Training Specialist, at (301) 447-1476, or by email at michael.weller@fema.dhs.gov. Good luck, and I hope to see you on campus.

Sincerely,

Eriks J. Gabliks, Superintendent
National Fire Academy
U.S. Fire Administration

Enclosures

National Fire Academy Bring Your Own Device (BYOD)
Course Materials/Download Instructions

The **first step** is to download ADOBE Reader to your device. This will enable you to read and manipulate the course materials. ADOBE Reader can be used to comment and highlight text in Portable Document Format (PDF) documents. It is an excellent tool for note-taking purposes.

For Laptops and Computers

ADOBE Reader can be downloaded from www.adobe.com/downloads/. It is a free download. Please note that depending on your settings, you may have to temporarily disable your antivirus software.

For Tablets and Other Similar Hand-Held Devices

ADOBE Reader can be downloaded onto devices such as iPads, android tablets, and other hand-held devices. ADOBE Reader for these types of devices can be found in the device's Application Store using the search function and typing in "ADOBE Reader." Follow the instructions given. **It is a free application.** Note: In order to have the editing capabilities/toolbar, the document needs to be "opened with ADOBE Reader." There should be a function on your device to do this.

After you have successfully downloaded the ADOBE Reader, please use the following Web link to download your R0378, "Demonstrating Your Community Risk Reduction Program's Worth" (DYCRRPW) Student Manual (SM). (You may copy/paste this link into your Web browser.)

https://nfa.usfa.fema.gov/ax/sm/sm_r0378.pdf

Note: Please make sure you download the ADOBE Reader first. To open the SM, you will need to open the ADOBE Reader and then open the SM through the ADOBE Reader in order for the note-taking tools to work properly.

If you need assistance, please contact nfaonlinetier2@fema.dhs.gov.

Name: _____   Department: _____
Position: _____

Demonstrating Your Community Risk Reduction Program's Worth
Pre-course Assignment (100 Points)

PART ONE: EXPLORATION OF AN EXISTING COMMUNITY RISK-REDUCTION PROGRAM

A significant portion of the DYCRRPW class will be dedicated to you designing and/or enhancing the evaluation strategy for an existing community risk-reduction program that is being offered by your department. Your efforts will be a graded process. To do well in the course, you will need some background information about a program your department currently offers.

Please consider choosing a program that has been in operation for at least a couple of years and that you have involvement with. This could be fire or injury prevention programs, home safety visitations, wildland urban interface (WUI) initiatives, building inspections, etc.

Once you have picked a program, perform the action tasks listed below. Save the information electronically and bring it with you to the NFA. Please note that you do not and should not collect the body of information about the program alone. Reach out to those who helped develop the program. Also, talk to people who, in addition to yourself, are delivering the program. Finally, if you can, also speak to people who have participated in the program to gain their perspective of the services your department has offered.

Action Tasks

Please do your best to gather a body of information pertinent to the existing program you wish to study. You should word process the following directives. **Note:** If you are unable to obtain some of the information requested below, please note why you could not obtain it.

1.   Identify the program (title).

2.   Summarize why the program was created and how long it has been in operation.

3.   Explain the overall goals of the program and how it is designed to operate.

4.   Identify the target groups/populations served by the program.

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5. Explain who helped develop the program and what type of planning process was followed.

6. Identify specific stakeholders (department and community) who helped develop the program. Explain the roles these stakeholders played in the development of the program.

7. Identify who is responsible for delivering the program. Explain if any of these people were involved in designing the program.

8. Identify any challenges encountered during program design.

9. Identify any challenges experienced during program delivery.

10. Attempt to locate the following data:

    a. Program delivery and outreach.

        -   The total number of programs/activities delivered to date.

        -   The average number of programs/activities delivered per month and year.

        -   The average annual number of people being served by your program per year.

        -   Is the program reaching your target groups as planned? Why or why not?

        -   What opinions does your department staff have about the program?

        -   What does your target population think about the program (likes/dislikes)?

    b. Program impact.

        -   Is the program changing the awareness and knowledge levels of participants? If so, how are you measuring this? Please provide some examples.

        -   Is the program changing the behaviors of participants? If so, how are you measuring this? Please provide some examples.

> c.   Long-term results.
>
> -   Has your program helped to reduce the types of incidents you are targeting? If so, what are the results, and how are you tracking them?

PART TWO: CONSIDER A NEW COMMUNITY RISK-REDUCTION PROGRAM

During the latter part of the DYCRRPW course, you will learn how to design an action/evaluation plan for a proposed community risk-reduction program. To prepare for that graded assignment, please perform the action tasks below.

Action Tasks

Please collaborate and consult with your department's leadership/risk-reduction team as you process these tasks. Please word process this section.

1.   Review your department's response data, and select a risk issue that your department has not been able to address but would like to. This could be a fire issue, false/ nuisance incidents, preventable injury, medical, WUI situation, property type concern, etc. Provide a brief summary of what the issue is and why your department wants to address it.

2.   Generate some initial ideas about what your department would like to do about the issue.

3.   List a few of the stakeholders that should collaborate to design a program to address the risk issue you have selected. This should be a combination of members from your department, potential target groups, community decision-makers, etc.

4.   List a few challenges that you may face that are associated with program development and future operations.

You will use the information as part of the DYCRRPW class.

Student Scoring Dimensions Guide (Example)
Pre-course Assignment

Existing Program — Assessment Criteria	Points
Submitted an assignment for review	_____/10
Identified the program and summarized its purpose	_____/10
Described program operations and target groups	_____/10
Summarized program outreach, impacts and long-term results	_____/10
Described challenges associated with program development and operations	_____/10

New Program — Assessment Criteria	Points
Submitted an assignment for review	_____/10
Identified and summarized a risk issue that needs to be addressed	_____/10
Proposed initial ideas about a program to address the issue	_____/10
Identified potential stakeholders to recruit	_____/10
Described challenges associated with program development and operations	_____/10

Total Score for Pre-course Assignment (100 points possible): _____

PART THREE: PRE-CLASS READING — EVALUATION 101

Please read the following information just prior to reporting to the NFA class.

Evaluation is an essential component of strategic community risk reduction. It is a process that begins in a program's planning stage and continues throughout its life and sometimes beyond. Whether an evaluation is being conducted on a public health initiative, school-based endeavor or community risk-reduction program, the process is the same.

At first, the terminology used in evaluation may appear intimidating. Do not let this be a deterrent to conducting evaluation. As with any skill, once you learn and gain experience with it, the process will become almost second nature.

The DYCRRPW course will help you better understand the **three stages of program development and the four stages of program evaluation.** It will also highlight the two methods of data analysis used during evaluation.

THREE STAGES OF PROGRAM DEVELOPMENT

The evaluation process for a community risk-reduction program should begin the minute an idea for a program is conceived. By evaluating each stage of a program, you can catch and solve problems early. The three stages of program development are:

1. **Planning:** Program activities are untested and the goal of evaluation is to refine plans.

2. **Implementation:** Program activities are being field-tested and modified; the goal of evaluation is to characterize real, as opposed to ideal, program activities and to improve operations, perhaps by revising plans.

3. **Effects:** Enough time has passed for the program's effects to emerge; the goal of evaluation is to identify and account for both intended and unintended effects.

FOUR STAGES OF PROGRAM EVALUATION

There are four distinct stages of program evaluation.

1. **Formative:** Focuses on the planning and development of a program.

2. **Process:** Tracks program activity and delivery performance.

3. **Impact:** Measures if the target population is making a change.

4. **Outcome:** Shows if incidents are being reduced or if big picture changes are taking place.

The following graphic supports the four stages of program evaluation.
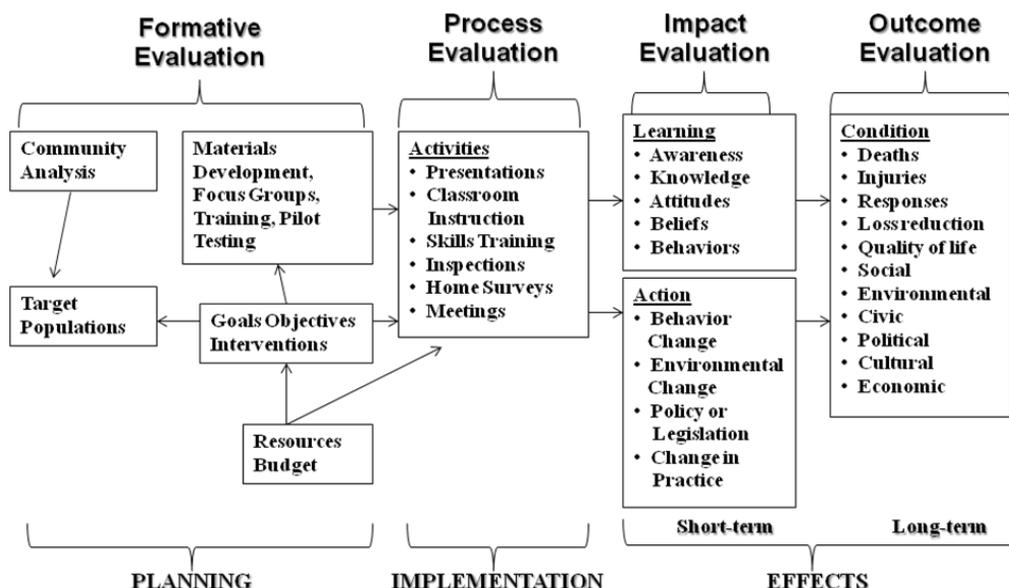
Formative Evaluation

Formative evaluation is used during the development of a new program or when an existing program is being modified. It is also used when a program is being used in a new setting, has problems with no obvious solutions, is presented to a new population, or targets a new problem or behavior. The main purpose of formative evaluation is to strengthen or improve the development/delivery of a program.

Unfortunately, formative evaluation is a step often overlooked or underused by program developers. One of the reasons why this stage of evaluation is not often used appropriately is the urge from "action-oriented" emergency services practitioners to "make things happen NOW." Remember, proper planning and evaluation helps prevent poor performance later.

Formative evaluation includes the following types of actions:

1. Community analysis — risks, extent, locations, community demographics.
2. Identification of target populations.
3. Materials development and testing.
4. Development of goals and objectives; formulating an action plan.
5. Identification of resources.
6. Analyzing the effectiveness of proposed messages.
7. Exploration of how target populations best receive messages.
8. Identifying whom the target population respects as a spokesperson.
9. Details about materials, strategies or mechanisms for distributing information.
10. Aspects likely to succeed and what needs to be changed.

With respect to a new program, formative evaluation is useful in that it allows developers to make revisions before the full effort begins, thereby maximizing the likelihood that the program will succeed.

Questions to answer during the formative evaluation stage for a new program include the following:

- Address local needs: Does the program seek to impact a local risk issue that has been identified through objective analysis of accurate data?

- Appropriate stakeholders: Are people/groups who have a vested interest in the risk issue involved in the program planning process?

- Knowledge levels: What do stakeholders know about the risk being addressed by the program?

- Introduction: When is the best time to introduce the program or modification to the target population?

- Plans and strategies: Are the proposed plans/strategies realistic and likely to succeed? Are timeframes for development and implementation present and realistic?

- Resources: Are adequate resources (time, people, money) available to develop, implement and sustain the program? Do resources support the goals and objectives of the program?

- Methods for implementing program: Are the proposed methods for implementing program plans, strategies and evaluations feasible, appropriate and likely to be effective?

- Ability to reach target populations (market research): How do people in the target population get information? What is the best way to communicate? Is it television, newspaper, radio, internet, word of mouth, or a combination of sources?

- Program activities: Are the proposed activities suitable for the target population? That is, are they current, meaningful, barrier-free, culturally sensitive, and related to the desired outcome? For example, is the literacy level appropriate?

- Logistics: How much marketing is required for the program? Are scheduling and locations acceptable? For example, would scheduling program hours during the normal workday make it difficult for some people in the target population to use the program?

- Acceptance by program personnel: Is the program consistent with staff's values? Are all staff members comfortable with the roles they have been assigned? For example, are they willing to distribute smoke alarms door-to-door or to participate in weekend activities in order to reach working people? Has staff been adequately trained to perform their prospective duties?

- Barriers to success: Are there beliefs among the target population that work against the program? For example, do some people believe that children are safer if they are held by an adult than if they are restrained in a car seat?

During formative evaluation you are learning about the development of your program. Who you ask to participate in formative evaluation depends on the program. A best practice is to ask questions and listen carefully to stakeholders.

Formative evaluation will show where you need help with program development. Always test proposed strategies, tactics and materials through pilot testing. Formative evaluation is qualitative not quantitative (measures quality of program development). Again, who you ask to participate in formative evaluation depends on the evaluation's purpose.

- If you are pilot testing materials for a new program, select people or households at random from the target population who share characteristics of the proposed target populations.

- When developing a program intended for older adults, select a random group of people who are above a specified age and exhibit common characteristics of the proposed target population.

- If you want to know the level of consumer satisfaction with your program, select evaluation participants from people or households who have already been served by your program.

- If you want to know why fewer people than expected are taking advantage of your program, select evaluation participants from among people or households in the target population who did not respond to your messages.

Formative evaluation is a dynamic ongoing process. Even after the community risk-reduction program has begun, formative evaluation should continue. The evaluator must create mechanisms (e.g., customer satisfaction forms to be completed by program participants) that continually provide feedback to program management from participants, staff, supervisors and anyone else involved in the program.

Focus groups are used during formative evaluation. A focus group is a small group of people that are brought together to discuss a specific topic. Groups can include between 4 and 15 people with the optimal size being 8. Focus groups are an excellent way to perform market research or conduct problem-solving activities. Groups contain members of an identified target population and are usually led by a moderator. The purpose of convening a focus group is to facilitate a discussion that generates qualitative information pertinent to the topic being explored.

Process Evaluation

Process evaluation, also known as program monitoring, should answer the questions:

- Are we reaching our target populations to the desired extent?

- Is the program being delivered as intended?

These are very important questions to answer because even the best designed program may not produce intended results if it is not delivered properly.

Process evaluation should begin as soon as a community risk-reduction program is put into action and continue throughout the life of the program. Process evaluation identifies the following:

- How many programs were delivered.
- When and where programs occur.
- Who delivered services and how well they did.
- How well a program is being delivered.

Process evaluation is critical because it examines how well the program is reaching its intended target populations. Keeping track of the following information is considered process evaluation:

- Program activity level.

  - Number of programs presented.
  - Locations of presentations.
  - Number of people who attended presentations.
  - Number of materials distributed.
  - Number of inspections performed.
  - Number of home surveys conducted.
  - Proposal of a public policy.

- Program/Staff performance level.

  - Participant satisfaction with program.
  - Performance of staff who deliver programs.

The methods for tracking process evaluation (forms, surveys, databases, etc.) should be designed during the formative stage of a program's development.

Process evaluation is useful because it identifies early any problems that are occurring in reaching the target population. It allows program supervisors to evaluate how well their plans, procedures, activities and materials are working and to make adjustments before logistical or administrative weaknesses become entrenched.

Process evaluation also allows one to understand why a program may or may not have influenced short- or long-term changes. For example, poor attendance may explain why a well-designed educational activity did not influence a target group's knowledge.

If process evaluation identifies unexpected problems with a program (especially if it shows you are not reaching as many people in the target population as you expected to), conduct additional formative evaluation to figure out why.

Do a good job in the process stage of evaluation and you will set up a pattern for ascending levels of success. Much of the information gathered during the process stage will be used as a foundation for impact and outcome evaluation when you calculate the effect your program has had on the target population.

Some components of process evaluation are similar to those performed in a program's formative stage of development. Don't let this fact confuse or deter you from doing evaluation. The main point to remember: start evaluating the minute you begin thinking about a program and keep doing it throughout its lifespan.

Impact Evaluation

Impact evaluation reveals the degree to which a program is meeting its intermediate goals. It measures two important levels of performance: learning and action.

With respect to learning, did the program influence any of the following among the target population?

- Awareness.
- Knowledge levels.
- Attitudes and/or beliefs.
- Skill levels.

With respect to action, did the program change any of the following?

- Target population behavior or lifestyle change.
- Change within a targeted physical environment.
- Public policy/legislation/adoption/enforcement.
- Hazard reduction.
- Change in practice.
- Decision-making process.

Although impact evaluation is arguably the most important stage of evaluation, it is often neglected or underused because it requires time, skill, planning, resources and effort.

Impact evaluation should be used after the program has made contact with at least one person or one group of people in the target population. It compares conditions that existed before a program was delivered to those present after it was completed. It requires that baseline measurements are taken before the program is delivered and after it has been completed. Impact evaluation mechanisms need to be designed during the planning (formative) stage of development.

Knowledge, attitudes and beliefs are almost always measured by some type of assessment instrument. The instrument could be a test, survey or questionnaire. Evaluators might also observe group discussions to watch and listen for signs of change among participants' knowledge, attitudes or beliefs.

Physical, environmental and lifestyle changes are usually assessed by direct observation. For example, an observer might check to see that seatbelts are positioned correctly, smoke alarms are installed appropriately or violations have been corrected.

Conducting impact evaluation is important because it allows management to modify materials or move resources. It tells program managers whether they are moving toward achieving goals. If the results of impact evaluation are positive, they can be used to justify continuing a program. If the results are negative, they can help justify revising or discontinuing a program. In addition to providing tangible evidence to evaluators, impact data can be used to show stakeholders and potential funders that a community risk-reduction program is working. In a case where a program is experiencing challenges, impact evaluation can be used to help justify support for adjustments.

Outcome Evaluation

Outcome evaluation demonstrates the degree to which the program has met its ultimate goals. It is strategic in nature and measures change over an extended period of time within the community. Outcome evaluation seeks to provide the following:

- Statistical proof that the risk-reduction program is reducing risk in the specified areas. Program success is proven by a reduction of deaths, injuries, and property and medical costs in the target area.

- Valid anecdotal proof (such as personal testimonials) that verify outcomes. Anecdotal proof is used frequently to measure outcome of social-oriented risk-reduction initiatives.

In some circumstances, outcome can be demonstrated by improvement in the target population's health and quality of life. Cultural change can be a measurement of outcome because it often leads to sustained levels of behavioral change.

Just like impact evaluation, measuring outcome requires baseline data about conditions that exist prior to the start of a program, initiative or strategy. It is difficult at best and often impossible to prove outcome unless baseline data is in place. This is especially true when attempting to measure changes in morbidity, mortality, and economic and social conditions.

It is difficult to attribute outcome changes to a single prevention program or specific community risk-reduction activity. Therefore, it is especially important to collect data during the first three stages of evaluation (formative, process and impact) to help prove your community risk-reduction program's worth.
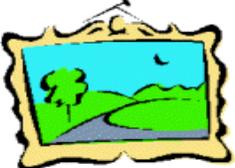
Preparation for outcome evaluation begins when the program is being designed (formative stage). The design of the program affects the quality of the data you will have for outcome evaluation. You can use positive results of outcome evaluation as even stronger evidence than the results of impact evaluation to justify continued funding for your program.

TWO TYPES OF DATA ANALYSIS

You have learned that there are three stages of program development: planning, implementation and effects. In addition, there are four stages of program evaluation: formative, process, impact and outcome. The final section to learn about prior to the DYCRRPW is the two types of data analysis: qualitative and quantitative.

To evaluate anything, a person must first collect data. Data can be collected in narrative format, observed in person and documented, or recorded through statistics. No meaningful inferences can be obtained from raw data until it is processed into useful information.

There are two ways to analyze data: qualitatively and quantitatively. Qualitative data analysis examines words, statements and testimonials. Quantitative analysis looks at statistics.

Qualitative Data	Quantitative Data
Overview: • Deals with descriptions. • Data can be observed but not measured. • Colors, textures, smells, tastes, appearance, beauty, etc. • **Qualit**ative → **Qualit**y	**Overview:** • Deals with numbers. • Data which can be measured. • Length, height, area, volume, weight, speed, time, temperature, humidity, sound levels, cost, members, ages, etc. • **Quantit**ative → **Quantit**y
Example 1: *Oil Painting* **Qualitative data:** • blue/green color, gold frame • smells old and musty • texture shows brush strokes of oil paint • peaceful scene of the country • masterful brush strokes	**Example 1:** *Oil Painting* **Quantitative data:** • picture is 10" by 14" • with frame 14" by 18" • weighs 8.5 pounds • surface area of painting is 140 sq. in. • cost $300
Example 2: *Latte* **Qualitative data:** • robust aroma • frothy appearance • strong taste • burgundy cup	**Example 2:** *Latte* **Quantitative data:** • 12 ounces of latte • serving temperature 150º F. • serving cup 7 inches in height • cost $4.95
Example 3: *Freshman Class* **Qualitative data:** • friendly demeanors • civic minded • environmentalists • positive school spirit	**Example 3:** *Freshman Class* **Quantitative data:** • 672 students • 394 girls, 278 boys • 68 percent on honor roll • 150 students accelerated in mathematics

Qualitative Data	Quantitative Data
Overview:	Overview:

• Participant opinion on content, quality and relevance of a prevention program.	• Program Outreach.
	
	    - Number of presentations or services offered.
	
	    - Number of people attending programs.

• Participant attitude about a program's subject matter or a service provided.	- Number of written materials produced/distributed.
• Feedback on the quality of program materials.	• Program Performance. - Test scores: Knowledge gained by participants after attending an educational program.
• Opinion on level of resources that are dedicated to a program.	- Skill performance: Ability of participants to perform a specific skill at a specified level after receiving services.
• Efficiency of program strategies and activities.	- Changes to living/working environment.
• Staff performance — selection, training, attitude and ability of the people who deliver services.	• Modifications made to a living/working environment. Example: The number of smoke alarms installed by staff. Total number of homes served.
• Costs in relation to what was delivered or achieved.	- Behavioral change: Number of participants who follow the program's protocol for conducting a specific task after receiving program services.
	- Anecdotal success stories: Number of participants who offer testimonial as to the impact of the program. (Example: My home was saved because the smoke alarm worked.)
	- Incident of loss: Statistics that show that deaths, injuries and property loss were reduced as a direct result of the program.

Qualitative Data	Quantitative Data
Example 4: *Smoke Alarm Program*	**Example 4:** *Smoke Alarm Program*
Qualitative data: • Target population's opinion of program • Satisfaction with type of alarms used • Feedback on quality or program materials • Target population feedback on staff members	**Quantitative data:** • Households served: 4,000 • Smoke alarms installed: 12,000 • Increase in smoke alarm compliance rate: 25 percent • Reduction in fire-related injuries: 20 percent • Reduction in fire-related deaths: 40 percent • Reduction of significant fires: 50 percent

Qualitative Data Analysis

Qualitative data analysis is the use of technical expertise and professional judgment to assess a program or service. It is an assessment process that answers the question, "How well did we do?"

• Qualitative data consists of words and observations, not numbers.

• Analysis and interpretation are required to bring order and understanding to the data.

• Qualitative analysis requires creativity, discipline and a systematic approach.

• There is no single or best way to perform qualitative data analysis.

The following is information that can be obtained from program participants through use of qualitative data analysis methods:

• Opinion on the content, quality, usefulness and relevance of a program.
• Overall appeal of program materials to target population (age and developmental appropriateness, user-friendliness, cultural sensitivity).
• Participant attitude about subject matter or service provided.

- Participant/Staff opinion on level of resources dedicated to program.
- Participant/Staff opinion on the efficiency of program strategies and activities.
- Staff performance — selection, training, attitude and ability of people delivering services.
- Costs in relation to what was delivered/achieved.

The method used for qualitative evaluation depends on the following:

- Questions you want to answer.
- Needs of those who will use the information.
- Resources available.

Qualitative data is extremely varied in nature. It includes virtually any information that can be captured that is not numerical. Here are some of the major categories or types:

- In-depth interviews.

  - In-depth interviews include both individual interviews (i.e., one-on-one) as well as "group" interviews, including focus groups.

  - The data can be recorded in a wide variety of ways including stenography, audio recording, video recording or written notes.

  - In-depth interviews differ from direct observation primarily in the nature of the interaction.

  - When conducting interviews, it is assumed that there is a questioner and one or more interviewees.

  - The purpose of the interview is to probe the ideas of the interviewees about the topic of interest.

- Narrative data.

  - Narrative data can be recorded in many forms and from a variety of sources. You might have brief responses to the following:

    -- Open-ended questions on a survey.
    -- Transcripts from an interview or focus group.
    -- Notes from a log or diary.
    -- Field notes.
    -- Text of a published report.

- Narrative data may be collected from an individual, small group or a large target audience. Any of the following may produce narrative data that require analysis:

    -- Open-ended questions and written comments on questionnaires may generate single words, brief phrases or full paragraphs of text.

    -- Testimonials may give reactions to a program in a few words or lengthy comments, either in person or in written correspondence.

    -- Individual interviews can produce data in the form of notes, a summary of the individual's interview, or word-for-word transcripts.

    -- Discussion group or focus group interviews often involve full transcripts and notes from a moderator or observer.

    -- Logs, journals and diaries might provide structured entries or free-flowing text that you or others produce.

    -- Observations might be recorded in your field notes or descriptive accounts as a result of watching and listening.

    -- Documents, reports and news articles or any published written material may serve as evaluation data.

    -- Stories may provide data from personal accounts of experiences and results of programs in people's own words.

    -- Case studies typically include several of the above.

- Direct observation.

    - Direct observation differs from interviewing in that the observer does not ask the participant questions.

    - The evaluator observes the participant.

    - The data can be recorded in many of the same ways as interviews (stenography, audio, video) and through pictures, photos or drawings.

- Written documents.

    - Usually this refers to existing documents (as opposed to transcripts of interviews conducted for the research).

    - It may include review of newspapers, magazines, books, websites, memos, transcripts of conversations, annual reports and so on.

    - Usually written documents are analyzed with some form of content analysis.

Qualitative data analysis asks the following:

- Are program materials educationally, technically and behaviorally accurate?

- Has the material been produced by a reputable organization? Is it culturally sensitive?

- Can program messages be clearly understood by members of the potential audience?

- How well does the program match the goals/objectives of the overall community risk-reduction strategy?

- Does the program support the changes needed to reduce a specific community risk?

- Do educational materials explain actions that target populations must take?

While qualitative data can produce very powerful anecdotal evidence, it is not without limitations. Some challenges of qualitative measurements:

- Problems of opinion and perception.

- The data collected may create differences of opinion.

- Not easily measured.

- Subjective opinions tend to be given less status than quantitative ones.

- Data not so easily collected; it involves more skill than collecting and interpreting quantitative data.

Stop, look and listen to people. Qualitative evaluation is very similar to formative evaluation. It needs to be well planned and follow an organized process.

Quantitative Data Analysis

Quantitative data analysis is an assessment process that answers the question, "How much did we do?" It is counted or expressed numerically and can be represented visually in graphs and charts.

Quantitative data analysis is often easier to implement and its data is easier to collect than its counterpart qualitative analysis. It is faster because it can be processed through a computer. It is easier to make comparisons over time and between places than with qualitative analysis. In general, it is easier for stakeholders to examine and comprehend.

Statistical trends and patterns are easier to identify than personal opinions. However, there is an important fact that must not be ignored: Relying solely on quantitative data can lead to simplistic judgments and the wider, more complex picture is ignored.

Quantitative analysis methods examine the following:

- Program outreach.

  - Number of presentations/inspections.
  - Number of people attending programs.
  - Number of materials produced.
  - Number of materials distributed.
  - If modified program (before to after).

- Program performance.

  - Number of corrections made.
  - Number of fire suppression equipment installed.
  - Number of people who could perform skill.
  - Percentage of people who had knowledge gain.
  - Percentage of people who perform a skill.

- Incidents.

  - Number/Rate of incidents.
  - Frequency of incidents.
  - Number/Rate of injuries and deaths.
  - Amount of property loss.

A thorough evaluation will employ both types of data analysis. Hard numbers (quantitative data) are very objective and "don't lie" so to speak, whereas qualitative data could give very rich explanations for why the numbers are the way they are.

Using both types of analysis will give the reader a good understanding of the conditions and results of the evaluation that has taken place. While qualitative methods of analysis are used most frequently in the formative stage of evaluation, they can also be used in process, impact and outcome stages. Quantitative methods are employed the most in process, impact and outcome stages.