

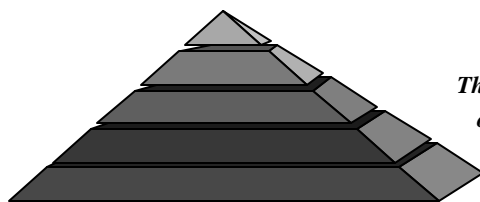
Tab E

Risk Communication

Module 5: Risk Communication

This module will focus on the importance of communicating public health risks effectively and efficiently. The tools you have learned through this course on effective communication will form the foundation for good, effective risk communication. When you have completed this module, you will have learned :

- (1) The key elements of risk communication;
- (2) How to perform a risk assessment to establish the hazard;
- (2) Determine the level of risk as it pertains to hazard and outrage;
- (3) Apply this information so you can communicate the risk effectively.



This module will build on the foundation of the communication skills given in the other modules of this course.

Overview of Risk Communication

The primary role of a public health professional is to protect the public from risks that impact human health. That protection involves research to determine what poses a risk and applying that research to the situation being observed. Thus, the health inspector must first identify the risks, establish the level of risk, and then inform others of that risk. Good communication skills are critical to this process.

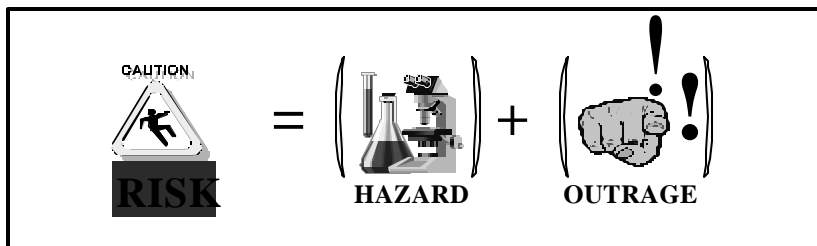
The basic rules of communication must be in place:

- Risk Communication is always a two-way process.
- Active listening is VERY important.
- Be objective, open, and honest.
- You are representing the views of your agency;
 - maintain your professionalism.

Key Elements of Communicating Risk

All effective communications of risk contain the same key elements. The first element is: *The Risk is Defined for the Situation.*

Risk can generically be defined as the technical -- scientific -- assessment performed to determine the impact of a substance (or agent) on human health PLUS the perception of that hazard by those affected. Thus, defining risk is a result of 'HAZARD' + OUTRAGE.

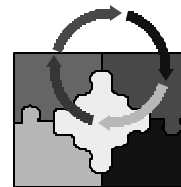


Defining the Risk for Specific Situations

Step 1: Calculating the 'Hazard'

Hazard is typically determined through a 'risk assessment' process. This process involves analyzing the toxicology of an agent - the impact of the dose (or concentration) on a specific population. Through the risk assessment process, you identify the:

- A) Causative agent.
- B) Mechanism of exposure.
- C) Dose to cause a response.



Remember: A Risk Can Only Occur If An Exposure Occurs!

Going Through the Risk Assessment

Assessing the risk may require any or all of the following:

Data Collection

If you are collecting the data, the samples should be (a) collected the same way by all, (b) transported appropriately, and (c) analyzed by equipment properly calibrated before use.

Data Evaluation

Whether you collect the data or not, you need to evaluate the impact of the agent under the circumstances that exist for your current situation; i.e., determine the dose necessary to create a response.

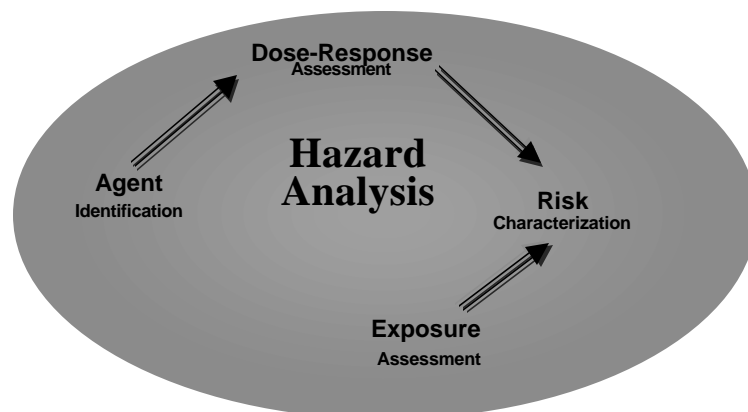
Risk Characterization

Once you know how the agent will respond under the conditions you are currently faced with, you need to determine the population at risk.

You need to determine the characteristics of those at greatest risk. This is the epidemiologic process of person-place-time.



Risk Assessment /Hazard Analysis Summary



PROBLEM*

Scenario - You walk into a kitchen for a routine inspection and you notice a potentially hazardous food product on the counter. The kitchen staff inform you the food is cooling. You note the container is about 6 inches deep and the time they gave you indicates the food has been there for about 5 hours.

* Outline the steps to determine the hazard for the scenario.

Hint - *To find the hazard level, you must determine (Risk Assessment Process):
(1) the agent(s), (2) the dose-response relationship, and (3) characterize the risk.*

Questions

Question 1: How would you know what agents to consider?

Question 2: If you had to sample, what is your sampling technique?

Question 3: How would you assess the quantity eaten to cause illness?

Question 4: How do you assess the population most susceptible to illness?

Question 1: How would you know what agents to consider?

ANSWER: Your education and training, along with resource material, will tell you the most common microorganisms to be concerned about. You need to think about if the agents are spore-formers, heat resistant, or have other properties that are important to determining the potential hazard level of the final product. That means you have to ask the operator (1) how the food is to be served, and (2) the additional processing, if any, the food may go through.

Question 2: If you had to sample, what is your sampling technique?

ANSWER: Generally, you would not sample for this type of situation since the research has consistently proven potentially hazardous foods out of temperature for 4 or more hours can cause a foodborne illness. If you did sample, you should have a procedure book that outlines the sampling process.

*All staff should know the appropriate sampling techniques and follow them .
NEVER make an assumption.....Talk it through - write it down.*

Question 3: How would you assess the quantity eaten to cause illness?

ANSWER: Depending on the agent(s) involved the quantity will vary. To determine the dose-response relationship, think about the type of facility preparing the food and the manner in which the food is being served. Will it be on an 'all you can eat' food bar? Is it a small amount served with certain dishes -- or -- will the food be an important part of many dishes on the menu?

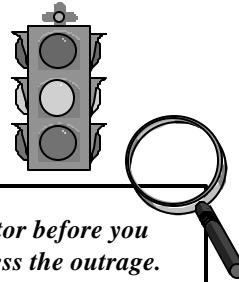
Question 4: How do you assess the population most susceptible to illness?

ANSWER: Characterizing the risk requires you think through the type of patrons the facility is serving. Those very young, elderly, or with serious underlying medical conditions are often your most susceptible populations. But most of all -- the risk for ANYONE exists only if the exposure has occurred!

Stop the exposure and you stop the risk (even if the hazard exists)!

Hazard Analysis is Necessary

As you know, a risk to any part of the public is a risk to all and will require appropriate action. But, you must go through the steps of hazard analysis and risk assessments -- at least mentally -- to confirm the action you will need to take (condemning the food item) is justified.



You must communicate the hazard to the operator before you proceed with the action AFTER you assess the outrage.

Defining the Rest of Risk for Specific Situations- part II!

Step 2: Calculating the 'Outrage'

Outrage is a critical part of the risk formula. This is the emotional element that must be taken into consideration before you should communicate the risk of a given situation.

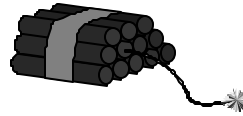
Since every person will take factual material and translate it into something they can relate to, there are multiple factors that influence outrage. Thus, determining this part of the risk formula is perceived to be more difficult to calculate and less predictable for many professionals than the 'hazard' part.



Calculating 'Outrage' By Observing

Human behavior tends to follow a pattern regarding the type of emotional response given when certain conditions exist.

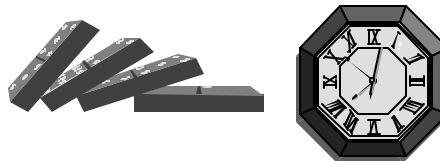
- **When people feel they have no control, they respond strongly, generally with anger.** **Example:** *A chemical plant being built in their county; an unannounced health inspection!*
- **When people feel they are losing control of rights, decision-making, etc. They respond strongly.** **Example:** *Being required to wear a seatbelt; being told they must allow a health inspector to hang around all day to do an inspection!*
- **When people don't respect or trust the person/agency telling them something, they respond strongly.** **Example:** *A chemical company says they aren't contaminating their river; a health inspector orders food to be thrown out!*



Calculating 'Outrage' By Predicting

Some responses are of anger; others are of fear:

- **When people see things that are dramatic/extreme, they will respond -- generally with fear.** **Example:** *A haz-mat team in 'moon suits' cleaning up a chemical spill; media footage of Foot-Mouth Disease.*
- **When people don't understand what they are being told, they may respond with fear.** **Example:** *An 'expert' describes what happened; a health inspector starts talking about 'spore-formers' and disease!*
- **When people know there is no cure or nothing can stop it, they may respond with fear.** **Example:** *They already ate the oysters potentially contaminated with Hepatitis A and it's too late for the vaccine or IG!*



Calculating 'Outrage' By Responding

And yet another response is no response, or complacency:

- When people know the impact won't occur for a while, they often don't respond with much. **Example:** *The space station will come crashing to earth some day; new construction regulations for kitchens will go into affect when they remodel.*
- When people believe their chances of being affected is slim, they don't respond. **Example:** *The tons of space station debris will land in the ocean; food left out too long could cause foodborne illnesses!*
- When people can't see the consequences or consider it not significant. **Example:** *The ozone layer is being destroyed by aerosols; an operator has used the same cooling technique for 10 years and no one has complained!*

