OVERVIEW OF SELECTED PROGRAM/PROJECT EVALUATION DESIGN.

	Description	Example – Using Bed Nets to Combat Malaria	Advantages	Disadvantages
Experimental Design	Use of random assignment to decide what group gets the intervention and what group does not. The groups are usually made to be as similar as possible so that you can attribute any positive or negative outcomes to your intervention (although you can never be 100% sure).	You give bed nets to people of village A at ***random*** and measure the rates of malaria before and after introducing bed nets. You then compare the results in village A with a control group in village B which has very similar demographic characteristics as village B.	Better for proving causality (that is that your intervention may have caused the outcome you desires).	Requires large amount of training, resources than other types of evaluation.
Quasi- Experimental Design	This is similar to experimental design above except that it is not as controlled. There is NOT necessarily any random assignment of the intervention. There is not necessarily any effort to make comparisons among equivalent groups.	You give bed nets to people of village A that you know (note this is not a random distribution of bed nets). You then compare the rates of malaria to another village C which is nearby but does not have similar demographics.	Better for proving causality than completely non-experimental design.	Is not as rigorous as a traditional experimental design for inferring causality.
Pre-/Post Comparisons	Here, we compare outcomes before and after an intervention has taken place.	You count the rate of malaria incidence before giving bed nets to everyone in village A and then calculate the rate of malaria after giving bed nets to village A.	Simple and easier to execute. More cost effective.	Is not as rigorous as a traditional experimental design for inferring causality.
Post Test Only/ Goal Based Evaluation	This is a method by which we only take into account if the changes that were desired were met.	You set a goal of having less than 20 people in the village getting malaria within 6 months after introducing	Simple and easier to execute. More cost effective.	Is not as rigorous as a traditional experimental design for inferring causality.

		bed nets. You then count the number of malaria cases in 6 months and see if you have met your goal.		
Cross-Sectional Studies	This is a type of study where data is collected from a population at a series of specific points in time.	You give bed nets to the people of villages A and B, and then every three months go back and record the number of people with malaria at that time.	Simple and easier to execute. More cost effective.	Is not as rigorous as a traditional experimental design for inferring causality.
Natural Experiments	In this type of study, the scientist takes advantage of two preexisting (natural) groups which act as an experimental group and a control group. These groups are not controlled by random assignment by the researcher.	You go to a village where a candidate for election has passed out bed nets to half of the families in a village. You then record the number of cases of malaria for the families with the bed nets and for the families without the bed nets.	Simple and easier to execute. More cost effective.	Is not as rigorous as a traditional experimental design for inferring causality.

This was developed based on the United States Health and Human Services Centers for Disease Control Introduction to Program Evaluation for Public Health Programs.

Note to Teacher about Inferring Causality: To infer causality there is traditionally several factors that need to be in place, you can introduce these concepts to the students informally:

- Strength of association – if research shows a reasonably strong association to between your intervention and an outcome
- Totality of evidence – if previous research has demonstrated that the relationship you are seeing is plausible and/or likely
- Scientific (or biologic) credibility – if there is a scientific explanation of the mechanism of the disease.
- Dose response – the classic example of this principle is with medication. It means that if you increase the levels of your intervention then you see an increase in the level of expected outcome.