

RHRC CONSORTIUM MONITORING AND EVALUATION TOOLKIT

THE CAUSAL PATHWAY FRAMEWORK

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PROGRAM PLANNING: WHAT IS IT AND WHY IS IT IMPORTANT?

By “planning,” we mean the thinking that goes into a project at its start, during redesign, or at any other point when you have an opportunity to assess how you can improve the work. The planning includes:

- *design (or redesign):* determining what results we want based on an assessment of the needs and resources available, and what interventions are most likely to achieve them;

and

- *monitoring and evaluation:* the information and methods we use to determine the degree to which our expectations are met.

The design, monitoring and evaluation decisions should be made as early as possible. Sometimes that means before any field activities are underway but, realistically, it can mean after some activities have begun. *This planning process can be adapted to situations you face in the field, including the challenge of improving existing projects.*

We all want our programs to have a positive impact on the people we serve. We don't always know what impact we actually have though – we often don't have the time, or the funds or the capacity to measure it. We are then faced with a problem: if we don't know whether the beneficiaries are better or worse off as a result of our programs, we can't tell what we should change and what we should continue. *This guide can help us improve our projects and thereby serve our intended audiences more effectively.*

More and more, real world considerations demand that our programs not only improve the lives of beneficiaries, but *show* that they have done so. Being able to demonstrate results has (at least) three advantages for our work:

- *we become better informed about and so can improve our programs.*
- *donors are happier and more inclined to initiate or renew funding.*
- *most importantly, the beneficiaries get more appropriate and higher quality services.*

A commonly heard frustration among staff is that, given the nature of field work and short funding cycles, “there is no time for planning.” A related frustration is that many (most?) projects do not have baseline data against which to measure later changes. This guide is intended to help field staff address these and other related questions. And it offers a monitoring and evaluation framework that can and should be adapted to field constraints.

HOW DO WE PLAN EFFECTIVE PROJECTS?

This is a fundamental question, and an important aim of this guide is to answer it by helping staff plan good quality programs.

In this guide, we describe a planning framework that can be helpful in the design (and, as we will see, also in the monitoring and evaluation) process. We will refer to this framework as the **CAUSAL PATHWAY FRAMEWORK**:

- **“CAUSAL”** because it is based on the premise that the activities you carry out should logically *cause* desirable results to occur;
- **“PATHWAY”** because it is based on the idea that the causal links form a technically and programmatically sound logical progression.

This framework may not be very different from the way you already think about planning programs, or you may already be using a tool or process that you find helpful. That’s fine. In such cases, this guide may serve as a reminder for what you already know; in others, it may be a new way of thinking about good programs.

A. USING THE CAUSAL PATHWAY TO DESIGN PROJECTS

The Causal Pathway is divided into five main components: IMPACT, EFFECTS, OUTPUTS, ACTIVITIES AND INPUTS, and we will describe each one in turn. The easiest way to describe the Causal Pathway is to present the concept as though we were developing a project.

When thinking about a program or project, most of us tend to think about the activities of the program. Whether it is education or clinical health services or well-digging, we often describe our work through the activities we do every day. However, we also need to keep the big picture in mind, to remember that our programs have a broader purpose – i.e., we are handing out condoms not for the sake of handing out condoms, but to increase the availability and use of an effective way to prevent STIs and HIV so that transmission is reduced, which will contribute to reduced illness and death among the refugees we are serving.

The ultimate “big picture” reason that we undertake many of our programs is to improve the social, economic and health status of the population with which we are working. In the language of the Causal Pathway, this ultimate purpose of the program is the desired IMPACT.

IMPACT	Change in the health, social and economic status of the population of interest through sector-specific contributions.
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In the condom distribution case above, for example, the desired IMPACT is reduced illness and death due to STIs and HIV, which will contribute to better health status. Another sector's contribution might lead to improved economic status or better social status of the population.

In a visual display of the Causal Pathway, we would place the program's IMPACT at the very end of the pathway, since that is where we are ultimately headed.



Now that we have something to aim for, we can go through the process of carefully examining how we are going to get there. We must ask ourselves what has to happen before we can see the improvement that constitutes the desired IMPACT?¹

In order for a program to result in the desired IMPACT, people must choose to change things about themselves, typically their knowledge, attitudes, skills, intentions and/or behaviors. In the language of the Causal Pathway, we call these changes EFFECTS.

EFFECTS Change in the knowledge, attitudes, skills, intentions and/or behaviors of the population of interest that contributes to the desired IMPACT

To illustrate, continuing with the condom distribution example: before you will observe a change in illness and death due to STIs/HIV (the desired IMPACT), people must (at least) *know* that condoms prevent disease (knowledge), *believe* that condoms are effective (an attitude or perception) and actually *use* the condoms (a behavior).

In a visual display of the Causal Pathway, we would place the EFFECT right before the IMPACT, since these changes must occur for the IMPACT to be achieved.



In the next step on the Causal Pathway, planners must once again ask, "What must be in place to enable people to make the changes described in the EFFECTS?" In service delivery projects, a set of products and services must be available if we expect people to use them.²

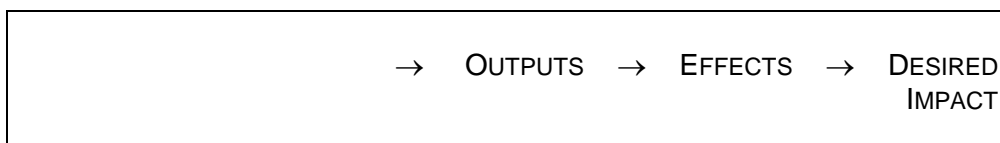
¹ You may already know of or use a planning process that is similar to the Causal Pathway FRAMEWORK, though it may use different labels (such as Goal or Purpose instead of IMPACT for example).

² Policies and other environmental factors, over which a project may have little or no control, will also affect the population's behavior. The Causal Pathway framework can, in fact, be used to plan a policy or advocacy project, but the application in this guide is oriented specifically to service delivery projects.

OUTPUTS Products and services that must be in place for the EFFECTS to be achieved.

Some of this is common sense: people cannot use condoms if none are available. So one product that must be provided to permit such a behavior (an EFFECT) is a reliable, convenient source of condoms. However, making condoms available might not be enough. People *might* not use condoms, even if they are available, if they know of no particular advantage to using condoms or if they believe condoms can harm them, among other reasons. So the project might have to create other products or services, in addition to providing the condoms themselves, to cause these knowledge and attitude shifts (EFFECTS). These services could be a community education network and a reliable distribution system.

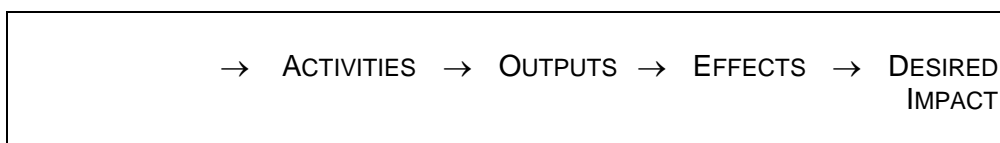
In our expanding visual aid, OUTPUTS are placed before EFFECTS, since they are needed for the EFFECTS to occur.



There are other reasons why people might not use condoms. Maybe the health centers where they are available are inconveniently located, or closed when you most want a condom, like in the evening. Or maybe some people feel uncomfortable in the health centers. These kinds of problems raise the question of *how* the planning process is carried out and *who* makes the planning decisions. Involving community members in program planning – and not just by asking them questions, but also by having them be part of the decision-making team – can increase the likelihood that the behavior changes and other EFFECTS needed will actually occur. If your EFFECTS call for young people to use condoms, then work with them to make condoms available at the places *they* identify.

The next question we have to ask is, “What does the project have to do to produce a reliable condom supply and a community education network (the OUTPUTS)?” It must do all of the ACTIVITIES that we often think of as the core of the program: mobilize and involve the community; develop curricula and community education materials; select and train workers to set up and maintain the condom supply system and to educate the community; supervise and support workers; and many other tasks. In the language of the Causal Pathway, we call these things (logically) ACTIVITIES.

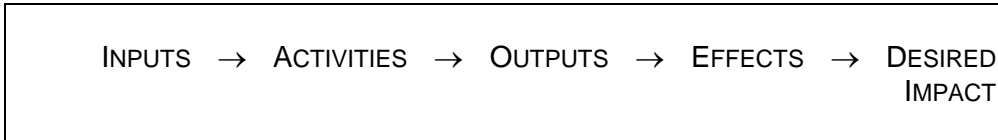
ACTIVITIES The technical and support tasks required to produce the OUTPUTS.



Finally, before you can begin your ACTIVITIES, the necessary resources must be available in adequate amounts. These resources are typically funds, staff, sites and

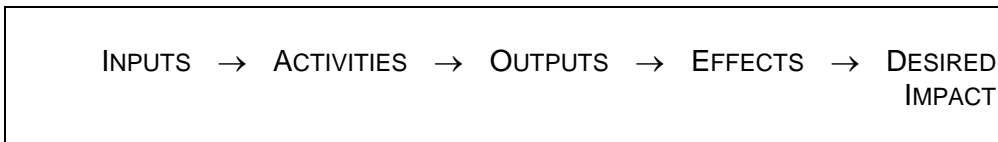
community good will. In the language of the Causal Pathway, we call these things INPUTS.

INPUTS Resources required to support your ACTIVITIES.



These are the five components about which you must be very specific to design a project that has a good chance of achieving its desired IMPACT.

You'll notice that we started at desired IMPACT and worked our way back to INPUTS. When designing a project, this is the correct direction to work in: *first*, identify where you want to end up and *then* determine the steps that are necessary to get there.



Unless you can trace *precisely* how your ACTIVITIES are linked to your desired IMPACT, you risk spending time and effort and money on activities that are not in the Causal Pathway. If you find that there is no clear link from a current ACTIVITY to an OUTPUT that is needed to obtain the intended EFFECTS and IMPACT, then you should question whether that particular ACTIVITY is needed.

THE CAUSAL HYPOTHESIS: A SUMMARY PROJECT STATEMENT

Now that you have thought through the logical links in the Causal Pathway, it is useful to summarize your thinking in a paragraph. Write a concise statement of the logic behind your project; we call this the Causal Hypothesis. It's a 'hypothesis' because it represents what you expect will happen, based on the best information available.

In general, the Causal Hypothesis takes the form:

“This set of INPUTS and ACTIVITIES will result in these products and services [OUTPUTS], which will facilitate these changes in the population [EFFECTS], which will contribute to the desired IMPACT.”

An example of a Causal Hypothesis for an HIV prevention project might be:

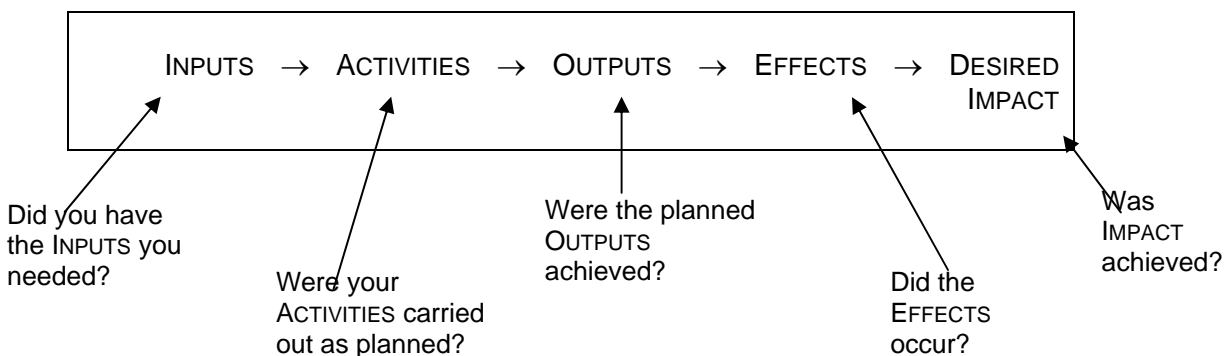
“Expertise and supplies provided by this project to train refugees to establish and maintain a condom distribution system and to provide appropriate community health education will result in adequate and consistent condom supplies, increased acceptability of condoms and increased use of condoms by the

refugees. These changes will contribute to improving the health status of the camp population by reducing the morbidity and mortality related to STIs and HIV.”

B. USING THE CAUSAL PATHWAY TO MONITOR AND EVALUATE PROJECTS

When you summarize your program in the form of a Causal Hypothesis like the one above, it pushes you to ask some questions about how you will know whether your expectations are met. How will you know if condom supplies are adequate and consistent? How will you know if condoms are used? How can you tell if morbidity and mortality have declined?

In general, we want to know if the steps in the Causal Pathway actually occurred as you expected them to:



The purpose of the project’s Monitoring and Evaluation system is to help you answer these questions. You must decide, *at the design or redesign stage*, what information you need so that the information collection can be built in from the very start of the project.

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IMPLEMENTATION, MONITORING AND EVALUATION DIRECTION

Since we can only answer these questions as the project is being carried out starting with INPUTS and ultimately reaching IMPACT, we can make our M&E plan that way too.

MONITORING AND EVALUATION: WHAT IS IT?

Monitoring and evaluation is the process through which we gain information about the activities and achievements of programs, in order to make decisions to improve them.

There are a few points about this definition that are worth emphasizing.

- M&E is a *process*, best done as a routine part of project implementation.
- it requires gathering information, which can be both *quantitative and qualitative*. We will focus largely on quantitative information in this framework.
- M&E is of no value whatsoever unless the information is *used to improve the program*.

We do not make a major distinction in the framework between monitoring and evaluation since the purpose is the same: to collect and use information to improve the program. However, it is often the case that monitoring is used to refer to the routine collection and use of information (from project records, for example), while evaluation usually refers to formal reviews, such as a midterm or final project evaluation. For an evaluation, staff often supplement the routinely collected information with information from special studies, such as a community-based survey and interviews with stakeholders, that are impractical to do very often as part of the regular monitoring system.

HOW DO WE KNOW IF THE CAUSAL PATHWAY STEPS OCCURRED?

Û MEASURE LINKS USING INDICATORS

To know whether the Causal Pathway is happening as we expected and as we stated in our Causal Hypothesis, we have to measure the steps along the Pathway. We can then know if a specific link in the Pathway is indeed occurring as planned, or if the link is breaking down and causing a dead end on the Pathway. Either way, it is valuable information – if it shows we are on track, it reinforces what we are already doing. If a link is not occurring as planned, then we have a problem and have to do something about it.

For example, if we are training workers just as we'd planned (an **ACTIVITY**), but the workers are performing no better in their jobs (an **OUTPUT**), then that link (i.e., that training leads to better performance) isn't working. And if your Causal Hypothesis depends on good workers to encourage the public to use your services (an **EFFECT**) to improve their lives (the desired **IMPACT**), then the broken link can cause the rest of the Pathway to fail.

This is an example of why it is so important to look beyond **ACTIVITIES** and very basic measures of **OUTPUTS**. In this example, if we were satisfied with simply counting the number of workers trained, we would not see any problem since, by that measure, the project is on track. Yet, by looking a bit farther – by looking at how they are doing their jobs after training – we see that the training is not causing the kind of change we need in the workers. So the problem is there; we just had not seen it before.

We measure the steps in the Causal Pathway using *INDICATORS*. We will focus here on developing indicators for **OUTPUTS**, **EFFECTS** and **IMPACT** since they are what we are trying to create from the **INPUTS** we commit to a project and the **ACTIVITIES** we carry out.

Indicators should be formulated precisely so that the measure is consistent from one time to the next. Indicators are typically formulated as numbers (#) or proportions (%) (which is the same as per 100), per 1,000, per 100,000, etc). As you plan your M&E system, make the effort to replace general concepts (for example, "Prenatal care" is not an indicator) with precise definitions (for example, "# of prenatal visits to clinic X in period Y," or "% of women with children under 5 who had at least 3 prenatal visits during last pregnancy.")

All projects should measure their **OUTPUTS**, many will measure **EFFECTS** and some will measure **IMPACT**. (This will be further discussed in the section below on *Setting Project Objectives*.)

Ü Output Indicators measure products and services provided by the program, *and the quality of these products and services*. Usually, project records are the main source of information for output indicators.

It is helpful and usually necessary for project management to track very basic measures of OUTPUTS, like “# of condom posters printed” and “# of workers trained.” It can also be useful to express the numbers as proportions, by comparing what has been achieved to what was planned. To calculate the indicator, “% of planned posters printed,” you would divide the # printed so far by the total # the project plans to print.

Since the quality of the products and services produced is often key to the success of programs, it can also be very useful for projects to measure quality. Consider the following three indicators for a project in which good staff performance is an important part of the Causal Pathway.

1. # of outreach staff trained
2. % of trained outreach staff who received rating of “good” or “excellent” on final training exercise
3. % of trained outreach staff who perform education and service responsibilities “well” or “very well”

The first indicator is very common in all kinds of projects, and it is important to track. But it does not tell you anything at all about staff performance, the aspect that really interests you.

The second indicator introduces an element of quality. In addition to knowing the number of workers trained, you could measure the proportion (%) who achieved a desired competence level by the end of training. You’d have to define specifically what you mean by “good” and “excellent” and then systematically measure it. There are various ways to measure it – for example, you could give a written test on the last day of training, or the trainers could observe and rate each trainee on a specific task.

The third indicator is stronger still because it does not measure just whether staff were trained, or just whether they knew the material on the last day of training. It measures how well they actually do their jobs on the ground. Again, the project would have to clearly define the standards for performing “well” or “very well;” these standards could then be incorporated into a checklist that the supervisor would use during visits to the field. She would observe the workers as they carry out their jobs, and rate them. (In a good supervision system, the supervisor and worker would then sit down and discuss strengths and weaknesses and decide how to improve performance and services.) If these field observations were done regularly over time (say a year or more), the project could track whether quality is at an acceptable level, is declining or is improving.

It clearly takes more effort to measure quality. It is up to you at the project design or redesign stage to decide whether having this information warrants the extra effort.

Choosing output indicators is an essential part of every project design. It is important to note that as important as they are, output indicators only tell us about the work we are doing. They do not tell us anything about the EFFECTS these products and services have on the population. This is why it may be worthwhile to also have measures of these changes (EFFECT indicators).

An important note about indicators: Two different projects might use the same *indicator* (“# of workers trained”) but have very different *targets*. One project might plan to train 1000 workers, and the other one 50 workers. The *indicator* they use, “# of workers trained,” is the same, it is simply the *target* that differs. This is why lists of standard indicators, such as those listed in the *InterAgency Field Manual on Reproductive Health in Refugee Situations* and the indicator references developed by the MEASURE Project and many other groups, can be very helpful.

U Effect Indicators measure the knowledge, attitudes, skills, intentions and behaviors of the population we are trying to help. It is usually a good idea to measure EFFECTS in your project if you can. It can be difficult, however, because it usually requires measurement at the population level (such as with a community-based survey). This is technically harder, more expensive and takes more time than using project-based records.

A reminder

We reserve the term EFFECT for the population we are trying to help. It does not include our staff or other workers, even if they are volunteer community workers and therefore part of the community. So, while it may be important in our Causal Pathway to change the knowledge and behaviors of nurses, TBAs and volunteers, that is an OUTPUT because they are the ones delivering the services to the broader population. When the general population of men and women gain knowledge and alter *their* behavior, *then* we have achieved EFFECT.

Like all indicators, effect indicators must be formulated carefully. In many cases, they can follow the form:

U [# or %] of
[population group of interest] who
[know / believe / do]
[specific knowledge / attitude / skill / behavior]

Examples of effect indicators that follow this formula include:

- 4** % of adolescents aged 15-24 who know at least 3 correct sources of condoms in their community (*an indicator of knowledge*)
- 4** % of adolescents aged 15-24 who correctly demonstrate how to put on a condom, using a wooden penis model (*an indicator of skill*)
- 4** % of adolescents aged 15-24 who report having used a condom the last time they had sex (*an indicator of behavior*)

These are examples of good *Effect* indicators because they are precise and meaningful. In the 2nd indicator, notice the element of quality: we are measuring whether the adolescents know how to put on a condom *correctly*.

Be precise and specific as you formulate your effect indicators. Avoid formulations like:

- X “adolescents who know condoms.” It does not specify # or % and it is not clear what they are supposed to know about condoms (i.e., that they exist, how to use them, where to get them, etc.)
- X “# of adolescents who use condoms.” It is best to be more specific. For example, do you want to know if the adolescent has *ever used* a condom? if she has used it in the last 6 months? used it the last time she had sex? used it since the start of your education efforts?

As in the earlier example, two different projects might use the same *indicator* (“% of adolescents aged 15-24 who know at least 3 correct sources of condoms in their community”), but have very different targets. To illustrate: If the Needs and Resources Assessment in Country A showed that most adolescents already know where to get condoms, the project might not be satisfied unless all or almost all (say, 90%) of the adolescents know by the end of the project. If, in Country B, condoms are not well known, it might be realistic to aim for 30% of adolescents. The two projects are using the same *indicator*, but have different *targets*.

To measure the indicator, “% of adolescents aged 15-24 who know how to correctly put on a condom,” your project would have to conduct a community-based survey with a random sample of this group (i.e., adolescents aged 15-24). For each respondent, you could (a) simply ask him or her if they know how to put on a condom, (b) ask him or her to describe the steps to you, or (c) ask him or her to actually show you how to put on a condom, using a wooden penis model. For methods (b) and (c), the interviewer would rate each respondent’s ability according to a predetermined scale (e.g., 3= he or she describes or does all steps correctly; 2=makes minor errors; 1= makes many mistakes or does not know). Describing and observing are more precise than simply asking “Yes” or “No” questions but it takes more time, and your observers have to be carefully trained.

Why do we insist that a community-based survey must be used to measure this indicator? Why not just interview young people at schools, which would be far easier than going door to door? The answer is that we want a representative sample of the population of interest – in this case, adolescents aged 15-24. Young people in school are often very different from those not in school, and those differences will affect your results. If you interview young people in schools, then you can not conclude anything about the broader population of adolescents. Your findings will be limited to school-going youth.

If you are able to measure EFFECT at baseline and follow-up, you will know if there was any change in knowledge, attitudes, skills or behavior in the population (but not necessarily whether your project caused the change). However, collecting such population-based measures may require setting funds aside to hire a survey consultant, or hiring program managers with survey experience. Moreover, surveys or other data collection exercises can divert attention from the project’s service delivery responsibilities.

Effect indicators are often more satisfying than output indicators since they tell us information directly about the population we are trying to help. This is closer to the end of the Causal Pathway, and that is generally something to aim for.

U **Impact Indicators** measure the health, social or economic status of the population of interest. They are often rates or ratios and are virtually always population-based measures.

Some examples of impact indicators are:

- 4 Crude mortality rate (also called the crude death rate; defined as the # of deaths per 1000 population in a given time period)
- 4 Population-specific mortality measures such as the infant mortality rate or under 5 mortality rate
- 4 Maternal mortality ratio (defined as the # of maternal deaths per 100,000 live births)
- 4 Total fertility rate (defined as the # of children a woman will bear in her lifetime at current age-specific fertility rates)

Again, we should not confuse *indicators* with *targets*.

Some projects are able to measure impact indicators, such as mortality, as relief organizations do during complex emergencies. Sometimes our desired IMPACT is far more elusive, however. For example, although we may want to reduce the poverty rate or improve the status of women, there are no standard definitions or commonly used measures for these concepts, so we must be creative. Measurement of other indicators, like the maternal mortality ratio, are limited by the available methodology.

CHECKLIST FOR SELECTING INDICATORS

Before you finally determine the indicators for your project, consider the following criteria. Indicators (and the methods used to collect them) should be:

4 Ethical

Information should be ethically obtained and managed. When you question people about personal information, it is important to respect their confidentiality and security and to tell them how you will be using the information and who will have access to it. Use informed consent. Examples of questions that are sensitive in nature include questions about ethnicity, religious background, income, violence and HIV status.

4 Useful

Don't collect "nice to know" information (as in, "Wouldn't it be nice to know ..."). Collect only the information that is directly related to your Causal Pathway so it will inform you about your progress and guide you in decision-making.

4 Scientifically robust

4 Indicators must be *valid*. Indicators are substitutes for the truth, and we want to choose indicators that get us as close to the truth as possible. So, if we want to measure "students' knowledge" in an education program, for example, we could choose, "% of students who pass the final exam." But is this a valid measure of knowledge? Some students are better at taking tests than others. Some students will not feel well the day of the exam. Their scores might not reflect their true knowledge. They will say the test was not a *valid* measure of what they really know. You have to decide if this measure is as close to the truth as you can get.

4 *Reliability* refers to the consistency of measures over time or over measurers. If two outreach workers measure "household cleanliness" on a 4-point scale, they should both come up with the same rating. And, if they come back in 6 months and the house is in the same condition, the rating each gives should be the same as it was on the previous visit. The checklist, and the use of the checklist, must be reliable.

4 An indicator that is both *sensitive and specific* gives you accurate measures and not false results. For example, if a woman reports that she "has enough food," it should mean just that, and not that she is too proud or too ashamed to accept food. If she reports that she "does not have enough food," it should mean just that, and not that she would like extra rations.

4 The indicators you choose must be *accessible*. That is, you must be able to collect the information with a reasonable level of effort. This depends, in part, on the data collection methods required. To gather population-based data (e.g., % of adolescents aged 15-24 who know at least 3 correct sources of condoms), it is necessary to conduct a population-based random sample survey. If your project does not have the time, money or expertise for this undertaking, then you can not use this indicator in your M&E plan because it is not accessible to you.

C. SETTING PROJECT OBJECTIVES

When you have completed your program design and are developing the monitoring and evaluation plan, you will have to decide if you are going to measure OUTPUTS only or if you are also going to measure EFFECT and/or IMPACT. This is an important decision, because it determines what you will choose as your Project Objectives.

In the Causal Pathway framework, the “Project Objective(s)” are what the project promises to accomplish *and measure*. You can think of it as the farthest point(s) along the Causal Pathway for which you will have evidence, or data. In most projects, the objectives will be one or more of the OUTPUTS or EFFECTS you have specified in your Pathway; in some cases, it will be the IMPACT.

Examples of **Output Objectives** that could be appropriate for a field project are:

- To provide high quality HIV education and condoms in the project area through a network of 200 community health workers, to begin within 12 months of project start-up.
- To increase the number of schools in the project region providing standardized secondary HIV education to adolescent men and women from 0 to 10 in 12 months.

There are several important points to notice about these two examples of Output Objectives:

4 They are S M A R T:

S	Specific <i>The project's intended accomplishments must be clearly identified.</i>
M	Measurable / quantified <i>The intended accomplishments must be quantified and good indicators and methods must be available to measure them.</i>
A	Attainable <i>This is a reality check: consider the context and resources you have, and whether the size of the planned change is feasible.</i>
R	Relevant <i>Your objective (and your program) must address a problem identified as important in the N&R Assessment.</i>
T	Time-bound <i>Specify a time limit for your objective and program.</i>

- 4 Notice that the objectives focus on delivering a particular service, rather than on what you expect to happen as a result of the service. In the first example, you are promising to provide good quality HIV prevention services and you specify the means by which the project will do that. You have not promised anything about how many people will use condoms (an Effect), or that mortality from HIV will decline by a certain amount (an Impact). The emphasis is on the service delivery, because it is an *Output Objective*.

The same points can be made for the second example. You are promising that there will be 10 functioning schools (a service), but you are not specifying the

change you expect in the students' knowledge, or the IMPACT you expect the HIV education to have on their lives.

WHICH DO YOU PREFER?

Consider these two “objectives” you might see in a field project.

- To train 18 secondary school teachers in HIV education in this province within 6 months.
- To increase the number of well-qualified teachers providing good quality HIV education in secondary schools in this province from 32 to 50 within 6 months.

The first statement is actually an ACTIVITY, something you have to do to produce an OUTPUT, which is reflected in the second objective. To have simply trained school teachers does not tell you anything about whether education is being provided, or about the quality of that education.

The second objective forces you further along the Causal Pathway; it focuses on the education being provided which is why you are training teachers in the first place. It also focuses on the quality of the education being provided.

Try to avoid stating your objectives as ACTIVITIES. Focus on the OUTPUT – the product or service you expect to occur because of that activity – or, to move even further down the Pathway, on the EFFECTS (changes in KAP of the population) that you expect will occur.

Examples of **Effect Objectives** that could be used in a field project are:

- To increase the proportion of women who accept long term contraceptive methods (includes IUD, Norplant, sterilization) from 20% to 40% of total users in 2 years.
- To increase use of STI testing and treatment services by men aged 15-24 in the project area to 20% in 1 year.
- To increase the proportion of enrolled secondary school students in all camp schools who pass the HIV exam from 50% to 75% in academic year 200x.
- To increase the proportion of commercial sex workers who report using a condom the last time they had sex from 50% to 90% by the end of the project.

Again, there are several important points to note about these examples of Effect Objectives:

- 4 Like the examples above, these objectives are S M A R T. (Actually, without a context, we can't really say that they are attainable and relevant. For example, expecting an increase in long-term method use to 40% of users may be much too ambitious in one place and perfectly attainable in another. Working with in-school youth might be a priority in one site and therefore highly relevant, but not be a key intervention in another. Also, objectives can almost always be made more specific but these examples are, in general, adequate.)

- 4 These objectives tell us something about the people's knowledge, attitudes, skills or behavior, because they are Effect Objectives. They go father along the Causal Pathway than the Output Objectives and so are more satisfying. So, for example, we not only know that we have functioning STI services, but we know that more men are using them. We still do *not* know, however, if and how those men's lives have been changed.
- 4 If your project commits to achieving and measuring EFFECTS, you will also need to measure the OUTPUTS leading up to the EFFECTS. One reason you need to do this is for routine management. Another reason is that, even if you are successful in showing that the Effect Objectives were obtained, it does not necessarily mean that your project *caused* the improvement. By having other measures along the Causal Pathway, you will have a better understanding of the contribution your project made to the observed change.

For example, say that you measure knowledge of sources of condoms at two points in time and that you observe the increase you wanted – at the 1st measure, only 20% of young people could name 3 correct sources and at the time of the 2nd measure, 50% could do so. If you know *only* that, there is not much you can say about why this increase occurred. (Things besides your project affect people's knowledge, attitudes and behaviors.) However, if you can *also* show that the ACTIVITIES in your Causal Pathway were carried out as planned and that the OUTPUTS were achieved as planned, then you can point to your Causal Hypothesis – which stated that an increase in knowledge was the expected result of your services – to make a good case that your project caused (or at least contributed to) the increase in knowledge about condoms. It is also very important to be aware of other changes in the environment that might have occurred since your Needs and Resources Assessment. For example, if other sources of condom information became available (on radio or through a campaign, for example), you may not be as sure about *your* program's contribution.

Impact Objectives are less common in field projects, but they may be appropriate in certain cases where measurement is feasible. Examples of Impact Objectives in programs might be:

- ü To reduce camp mortality to 1 death per 10,000 population per day by the end of the nth week of the emergency.

A few points about Impact Objectives:

- 4 We have defined IMPACT as a change in the health, social and economic status of the "population of interest." Generally, we understand that to be the broad population with which we work, or large subsets such as women or students. When we can show a status change among these large groups, we have achieved IMPACT.

We may need to be more careful in declaring "Impact" when working with smaller groups. In a project that provides services to a relatively small number of families, for example, those families' situations might improve, but the economic status of the broader "population of interest" may not be affected.

- 4 Often, the desired IMPACT is a status change that is very difficult to define and measure, and therefore difficult to articulate as an Objective. Thus, a project may desire an improvement in the social status of women; in the absence of a clear measure of this concept, it could be defined as a collection of attitudes and behaviors, and articulated as Effect Objectives.

WHY NOT ALWAYS USE IMPACT OBJECTIVES?

Since IMPACT is what we want to achieve in our programs, why would we even consider using Output or Effect Objectives? Why not always state and measure Impact Objectives?

There are five good reasons why you might choose to use Output or Effect Objectives in your project. All of them are linked to one unavoidable fact: when you articulate your objective, you are committing to measuring whether it has been achieved. If you state an Impact Objective, you must measure IMPACT.

The five reasons for choosing an Output or Effect Objective in your project are described here. Read on, because the most important one is last.

- 4 You can only measure the changes that will occur in the time the project will be present. Depending on the starting point, time frame and likely pace of change, the project might not be in a site long enough to observe a change in IMPACT. But you might be there long enough to produce and measure OUTPUTS or observe EFFECTS.
- 4 As we noted earlier, some desired IMPACTS, such as improved women's social status or psychosocial health status, are not easily measurable. Even measures that are precisely defined may lack a method of measurement that can be applied to a specific field site; the maternal mortality ratio is an example of this methodological constraint.
- 4 There may be political, legal or cultural constraints that limit your ability to openly discuss certain topics. We may create problems for individuals or for an organization by collecting data on sensitive topics such as economic activity or status; ethnicity and relationships with other ethnic groups; or psychosocial health.
- 4 Measurement requires resources – in funds, staff, time and expertise. Output data are usually relatively easy to collect, population-based Effect data collection generally requires more resources, and collecting Impact data may require even more intensive efforts. Each project must decide where its resources are best used.
- 4 The most important determining factor for how far you should measure is the *strength of the Causal Pathway*.

A strong Causal Pathway has good scientific evidence and/or documented program experience that it works – that it is really *causal*. The causal link between correct IUD insertion and prevention of unwanted pregnancies, for example, is very strong. We know this from decades of scientific research and

plenty of program experience. It is not something your organization has to prove in each of its health projects.

So, if the OUTPUTS measured in a health project show that the clinics have all the equipment they need, providers have the requisite knowledge and skill and that IUD insertion services are readily available; and your EFFECT measures (available from project records in this case) show that the planned number of women is obtaining IUDs, you can have confidence that unwanted pregnancies will be prevented, *even if you do not measure it*. The Pathway is strong – IUDs, inserted correctly, *will* prevent unwanted pregnancies – so there is no need to measure all the way to its end, even if you had the resources and time.

In other Pathways, the “causal” links between OUTPUT and EFFECT or between EFFECT and IMPACT are not so clear or proven, so the only way to know if they really occurred as planned is to measure them. For example, just because a health worker gives a woman a condom, it does not mean the woman will use it. So, we would measure the OUTPUT (indicator: # of condoms distributed) but we should also measure the EFFECT (indicator: % of refugee women who report using a condom the last time they had sex.”). We might not have to measure IMPACT (mortality from HIV and/or morbidity from STIs), however, because the proven link between use of condoms and disease prevention is quite strong.

What this means for our planning process is that we have to be careful of our assumptions. We may not be able to assume that just because we make information available, the population is more knowledgeable and that this knowledge will translate to behavior. What we can not assume, we should measure.

It also means that those who plan projects must have a good technical grasp of their fields. They should be aware of new research and program findings that can be used to strengthen programs. For example, we know that face-to-face health counseling used with printed information can increase a woman’s knowledge, retention and likelihood to take action. By applying this finding in a health program, we can strengthen the link between the OUTPUT (health education provided) and EFFECTS (knowledge and behavior).

Staff’s up-to-date technical knowledge will also help us avoid mistakes. There are many “Causal Pathways” that are not, in fact, “causal.” Some pathways are unproven, despite substantial research, and others have been *disproven* – either they are very weak or they don’t work at all. Increasing the proportion of women who obtain antenatal care, for example, is not linked to lower levels of maternal mortality. (The technical reason for this is that the immediate causes of maternal mortality can neither be predicted nor prevented. Even women with very good antenatal might experience severe hemorrhage or obstructed labor, for example. What will save their lives is rapid and good quality emergency obstetric care.)

You should not replicate disproven pathways in the field, and be cautious with unproven pathways.

[Click here](#) for a program plan outline based on the Causal Pathway Framework.