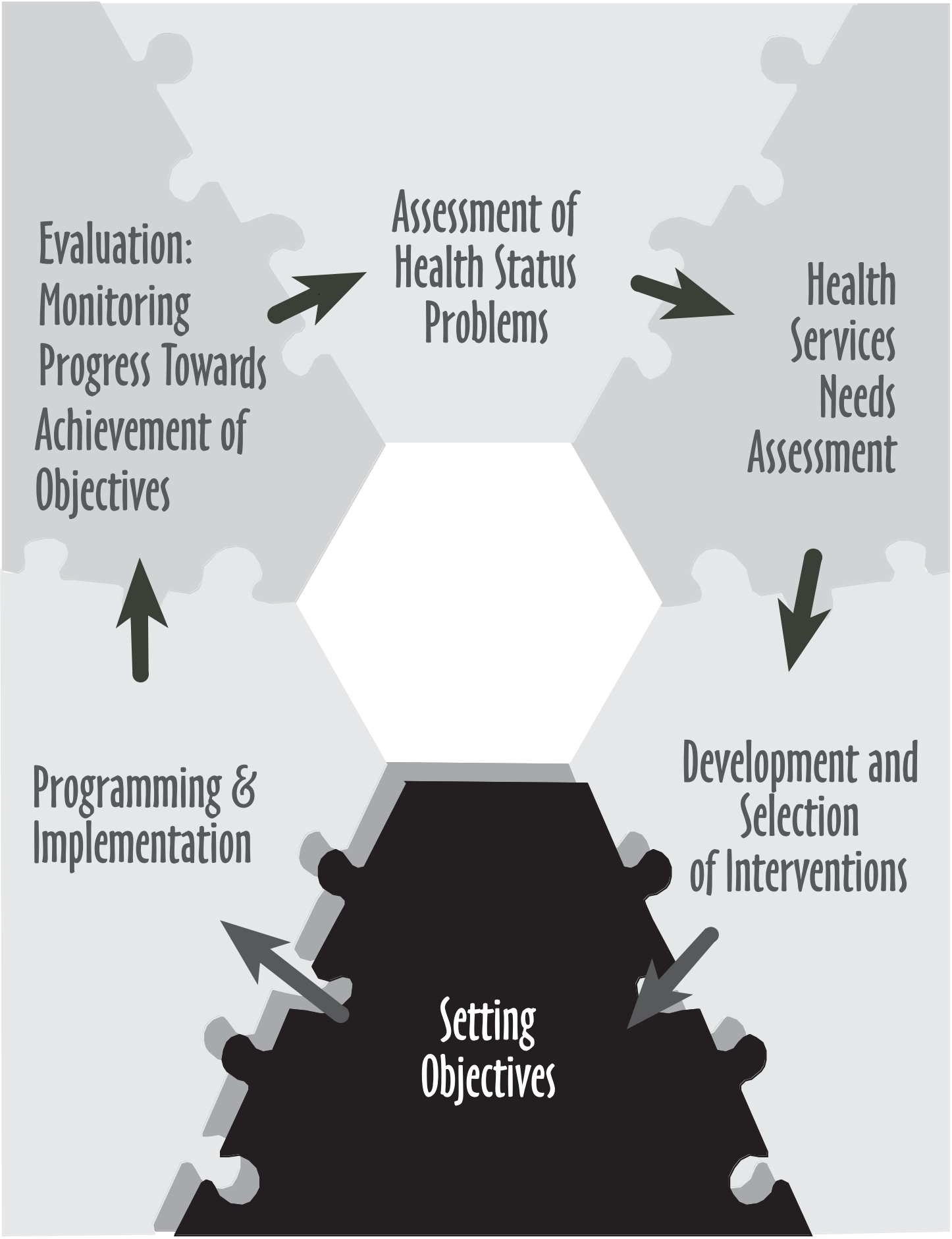
Assessment of Health Status Problems
Health Services Needs Assessment
Development and Selection of Interventions
Programming & Implementation
Evaluation: Monitoring Progress Towards Achievement of Objectives
Setting Objectives

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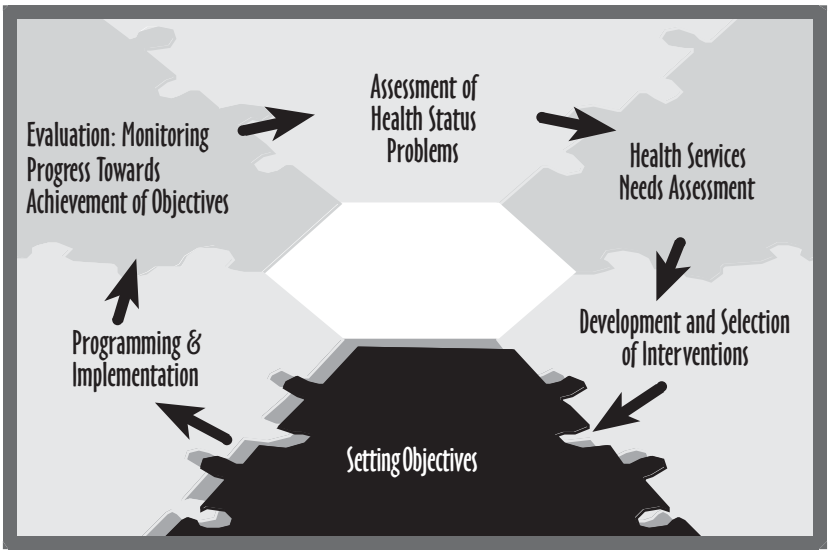
The BIG Picture . . .

Figure 1.



You are about to proceed through a self-instructional manual that was designed to help you develop skills in one of the steps of the rational planning process. There are six manuals in this series, each of which explains a step in the process and how to accomplish it:

1. Assessment of Health Status Problems
2. Health Services Needs Assessment
3. Development and Selection of Interventions
4. Setting Objectives
5. Programming and Implementation
6. Evaluation: Monitoring Progress Towards Achievement of Objectives

Each of the steps builds on the ones that precede it and contributes to the ones that follow. This circular process is diagrammed in *Figure 1*.

Assessment of health status problems is the foundation step for the entire planning process. This step involves careful specification of the dimensions of a problem and analysis of its precursors. In the second step, the focus shifts from the health problem to health services. A health services needs assessment examines the adequacy of existing services to prevent the problem by attacking its precursors or compensating for their effects. Where existing services fall short, unmet needs for service become apparent. Step three involves development of interventions to meet these unmet needs. This is the

step that links needs and interventions and constitutes the essential rationality of the planning process. Step three also involves a deliberate selection process, in which each alternative intervention is compared to a set of relevant criteria to identify the most appropriate one to be implemented. Once an intervention has been selected, it is possible to develop measurable objectives (step four) which, as a whole, constitute one or more hypotheses regarding how the program's activities are expected to contribute to an improvement in the problem. The objectives form a blueprint of the program, which is further elaborated in step five, including placement in the organization, job descriptions, budgeting, and implementation activities.

Step six in the cycle of program planning is evaluation. Evaluation involves comparisons between actual experience and standards. There are two major ways of thinking about evaluation. One is a research activity, called evaluation research. The second is an administrative function called monitoring. Monitoring involves assessment of progress towards achievement of the objectives of a program. By monitoring the extent to which targets are achieved, you can determine whether the program has fallen short on some objectives. If it has, this information should trigger an in-depth search for the reasons the targets were not achieved. This search, in turn, is part of the health status problem and service needs assessments in the next round of planning. Monitoring progress towards achievement of objectives is the last self-instructional manual in this series. We did not develop a manual on evaluation research because these methods are discussed extensively in other sources.

These six manuals present a framework for program planning that encourages development of creative, responsive and comprehensive interventions. The framework is useful for addressing problems that range from the very simple to the most complex. It allows for movement back and forth to revise earlier steps based on information that may emerge later in the process. The circular planning cycle may be entered at any point and rational progress can be made as long as the sequence of steps is understood and followed. An emerging problem, for example, may require careful attention to every step in the process, starting with assessment of the health status problem, and ending with an evaluation of the selected intervention. Planning in the context of well-understood problems and ongoing programs, however, may require emphasizing the objectives and programming steps which need frequent adjustments to stay on track. The framework is also flexible enough to be used at any jurisdictional level. While the relative emphasis on particular steps is likely to vary across jurisdictions, the framework provides a common frame of reference.

Program planning serves as a bridge between and among theories, measurement sciences, substantive content, and actual practice of public health. These manuals offer you technical guidance for carrying out the six steps in the planning process. Your planning skills will be enhanced further by training in such analytic areas as epidemiology, biostatistics, decision analysis and evaluation research, and in interactive domains like community development, group process, and leadership. Your greatest challenge as a program planner is to use the rational planning framework to apply each of these skills in the right amount and at the right time to combat public health problems effectively.

Table of Contents

What is this manual about?

This is a self-instructional booklet designed to teach you to develop measurable objectives for program planning. This straightforward method that you will learn facilitates the planning, management and evaluation phases of the program. As you work through this manual, you may wish to practice the concepts in a program that you are currently developing.

Introduction

Setting objectives is one step in the rational planning process illustrated in *Figure 1*. The program's objectives are developed from the health status problem assessment and they, in turn, guide the development of the program. The objectives also provide structure for evaluating the program. Remember that these steps are interrelated. The role of objectives in the rational planning process will become clear as you progress through this manual.

In this manual, you will learn:

- How objectives contribute to rational program planning;
- How objectives may be used as:
    1) a blueprint for the program
    2) a basis for program administration
    3) a basis for program evaluation;
- Tthree different levels of objectives;
- How to use a problem analysis diagram to construct a program hypothesis; and
- How to state objectives in a measurable way.

What can I do with objectives?

Objectives are statements of purpose: What is to be accomplished? How is it to be done? By what date? and, To what extent? Objectives that are clearly and logically constructed provide a reader with the essence of the plan as a whole. You could say the objectives are a **blueprint** for the program.

Program administrators can use the objectives for decision making and resource allocation. If something about the program doesn't align with the objectives, then either the activities or targets need to be changed. The objectives are then useful as a **framework** around which the program is constructed and amended.

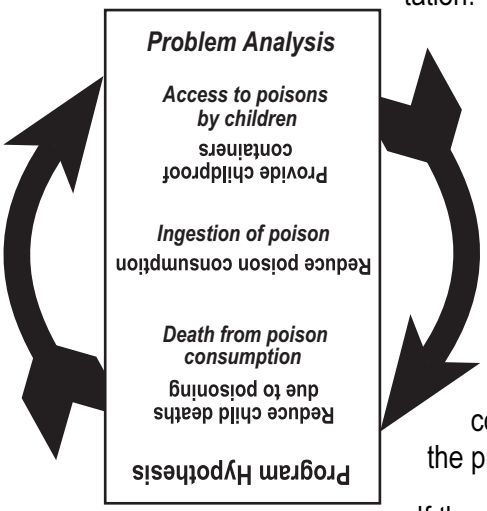
Objectives can be used as standards for comparison with the program's progress. The objectives then become a **yardstick** by which the program is measured. These same objectives can form the basis for assessing cause-effect relationships.

Where do objectives come from?

Objectives are derived from the analysis of the problem. To understand this, it is helpful to discuss the process of developing a program. In generating possible strategies for resolving a problem, each precursor identified in the problem analysis is considered a potential point of intervention. Efforts to alter any of the precursors could, theoretically, alter the chain of events leading to a health problem.

Possible interventions are identified for each precursor. The extent to which those interventions are needed in the community is then assessed, resulting in identification of interventions that could address the problem effectively but are not in place now. From this set of interventions, one or more is selected for implementation.

Figure 2.



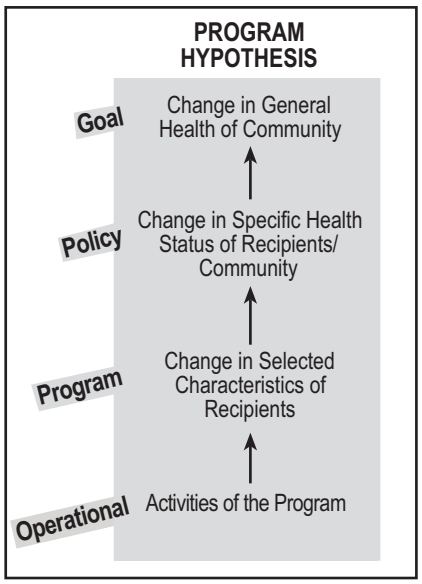
Thus the program evolves directly from the problem. As a result, an intervention aimed at a precursor should trigger a sequence of events that mirrors the relationships depicted in the problem diagram. This is shown in a simplified manner in *Figure 2*. These events that are expected to occur because of the intervention are the subject matter of the program's objectives.

Whether or not the final program is the one for the job depends on how well the program addresses the problem through its precursors. When reading the objectives it should be easy to see where each corresponds to the problem analysis. A good fit between the program and the problem analysis is the goal of the rational planning process.

If the objectives are conceptualized correctly, the remainder of the program development process, as well as management and evaluation of the program itself, are greatly facilitated.

What is a program hypothesis?

Figure 3.



As stated previously, objectives are statements of the purposes of a program: What is to be accomplished and how it is to be done. The objectives combine to form a program hypothesis.

Figure 3 shows a framework for understanding the concepts behind a program hypothesis. A program provides one or more activities or services which are expected to produce outcomes in the form of changes in some characteristics of those who receive the services. Characteristics targeted for change might include knowledge, behavior and biochemical levels in the body. By altering these characteristics in some manner, we expect that specific aspects of the health status of recipients and, subsequently, the larger community will improve, thus improving the general health status of the community. The specific population represented at each level may vary but the principle that achievement of one level constitutes the means for reaching the next higher level is the core of a sound program hypothesis.

How do objectives form a program hypothesis?

Figure 4.

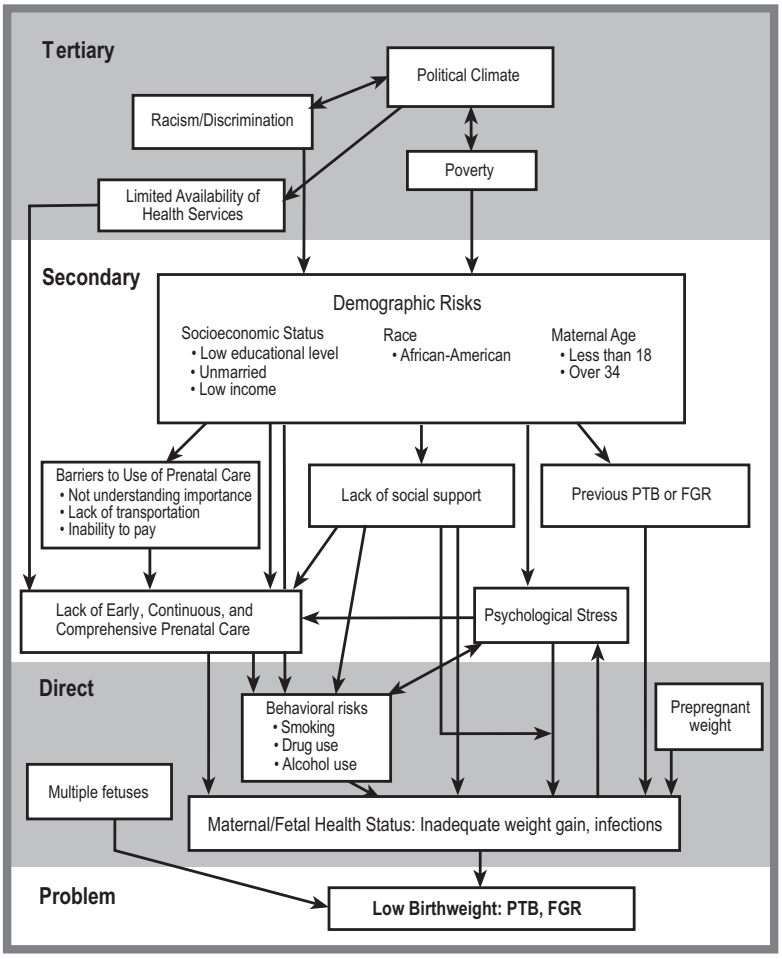
Goal:	A broad statement of desired health status which does not have to be measured. All of the objectives, however, must be stated in measurable terms.
Policy Objective:	A specific, measurable statement about the desired extent of improvement in a health status problem.
Program Objective:	A specific, measurable statement of desired change in knowledge, behavior, biomedical measures, or other intermediate characteristics that are expected to occur because of the intervention and before the policy objective can be reached.
Operational Objective:	A specific, measurable statement of an activity to be carried out by the program or intervention.

The levels presented in *Figure 3* correspond to three levels of objectives that lead to a single goal. For the purposes of this manual, specific labels (**Goal**, **Policy**, **Program**, and **Operational Objectives**) have been assigned to the different levels. These are defined in *Figure 4*. In practice, other labels can be substituted without compromising the integrity of this approach.

Many of the concepts presented in this manual are illustrated by a sample program. Background information on this program is presented on the next page. The program objectives and hypotheses are shown in *Figure 6*.

Figure 6 is a diagram of the program hypotheses for the York County program. As you can see, the goal is a broad statement of purpose while the objectives are much more specific. Essentially, the program involves facilitating pregnant teenagers' use of prenatal care by reducing barriers and providing emotional support. The program designers expect that these activities will affect the teenagers' use of health

Figure 5. Problem Diagram for Low Birthweight in York County

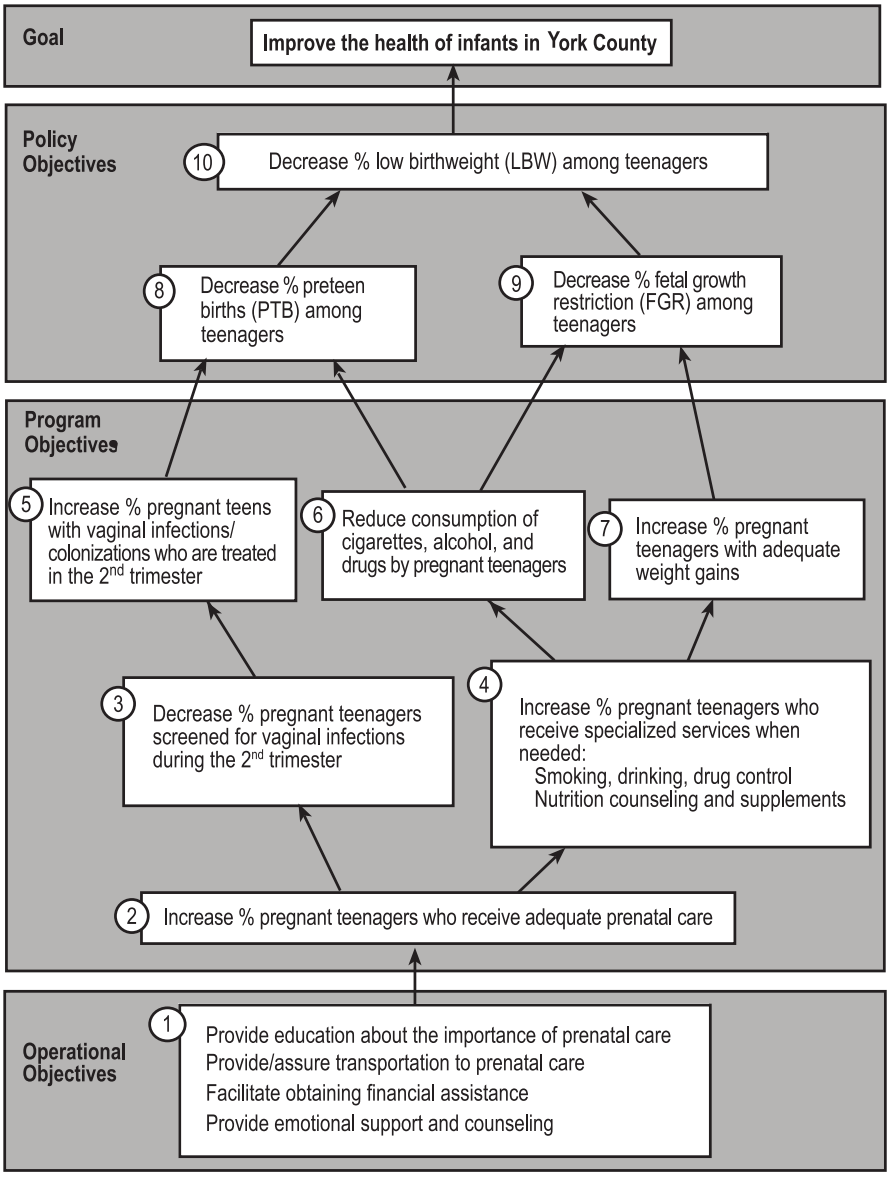


York County leaders were alarmed about the high incidence of low birthweight (LBW), and its components, preterm birth (PTB) and fetal growth restriction (FGR), since these conditions put infants at risk for medical and developmental complications and even death. *Figure 5* is a diagram of the problem produced by the York County planning group. Through this analysis, the planners found that adolescents had disproportionately high rates of all three of these problems. Their assessment also revealed that LBW, PTB, and FGR have been very resistant to interventions, with the expected link between prenatal care and these outcomes controversial. Nevertheless, with the emergence of new directions for interventions in recent years, prenatal services, especially those likely to be used by adolescents, had been revised to focus intensively on recognition and treatment of vaginal infections, modification of behavioral risks like smoking, drinking alcohol, and drug use, and improvement of maternal nutrition in York County. Yet a large percentage of teenagers were not beginning prenatal care early enough or receiving it in sufficient quantity and depth to realize the potential benefits of these services. Further analysis of the problem and services revealed that pregnant teenagers:

- Felt it was unimportant to seek early prenatal care or to continue with care once they started it;
- Had no transportation to prenatal clinics;
- Had difficulty paying for prenatal care; and
- Were often single and without emotional support from families.

It was decided to design a program that would use trained lay women to help the pregnant teenagers gain access to prenatal care by dealing with identified barriers to care and by providing emotional support.

Figure 6. Program Hypotheses



services, which will lead to detection of vaginal infections, improved nutrition, and reduction of behavioral risks. These changes would then lead to reduction in the percent of low birthweight infants by reducing rates of FGR and, especially, PTB. The program hypotheses *(Figure 6*) show how these activities and outcomes relate to each other. Note that there is more than one objective at each level, and that each objective represents an element in one or more hypotheses.

NOTE: Numbers are used in Figure 6 *to illustrate the paths of the program hypotheses. For example, the first path follows the boxes in the order 1, 2, 3, 5, 8, 10; the second path, 1, 2, 4, 7, 9, 10. The four activities that are grouped together as operational objectives (Box 1) could be separated. They are grouped in this diagram because they will be delivered as a package.*

What are objectives made of?

Each objective is composed of one subject and one or more targets. Subjects can be **indicators** or **activities**. For policy and program objectives, the subject is an indicator of a specific health or health-related condition. Indicators are measures of expected program outcomes that correspond to health and related conditions of the population. The subjects of operational objectives are activities that will be done as a part of the program.

Indicators and activities must be precise. Often this means activities and indicators that are appropriately stated in the program hypotheses must be restated in even more detail to serve as measurable objectives. Several examples of this may be found by comparing the objectives in *Figure 6* with those in *Tables 2* and *3*.

Indicators also require acceptable and unacceptable levels of achievement. For example, in the York County case an indicator of one objective is the percentage of pregnant teenagers who have adequate weight gain during pregnancy. While some disagreement exists regarding "normal" and "abnormal" ranges of weight gain, reasonably acceptable cut-off points can be defined. The specific measures and acceptable range may be stated in the indicator or they may be given in a narrative description of the program.

A **target** is a numerical value that identifies the minimum desirable level of achievement for a particular activity or indicator. A target usually has two parts: quantity or amount, and date of anticipated achievement.

Policy Level Objectives—Table 1 indicator + target

Table 1. York County Program Policy Objectives, Years 1–3*

Indicator	Target
% who have a low birthweight infant	15% reduction
% who have a preterm birth	15% reduction
% who have fetal growth restriction	5% reduction

* Indicators refer to all pregnant teenagers £18 years old in the program and in the county.

A policy level indicator is an expected program outcome that corresponds to health status (and related conditions), not program activities. Policy objectives are usually calculated for both program recipients and the larger community.

The target is long term; usually, you cannot see results in the short term. The date in the target is usually understood to be the life of the program although it can be less. If it is less, it must be stated as such.

Program Level Objectives—Table 2 indicator + target

A program level indicator is a program outcome that corresponds to specific biochemical measures, knowledge, attitudes or behaviors in the population for whom the program is intended. As with policy objectives, the date in the target is usually the life of the program, although it can be earlier. If it is earlier, it must be stated as such.

Table 2. York County Program Objectives, Years 1–3*

Indicator	Target
% who start prenatal care before 14 weeks gestation	35% increase
% who have 7 or more prenatal visits	35% increase
% screened for vaginal infections during 2nd trimester	80%
% smokers who participate in cessation programs/activities	75%
% drug/alcohol abusers who participate in cessation programs	75%
% WIC eligibles who enroll in WIC	90%
% who receive nutrition counseling	90%
% vaginal infections/colonizations treated with antibiotics in 2nd trimester	80%
% smokers who decrease daily average consumption	40%
% smokers who quit	10%
% alcohol users who quit	80%
% drug/alcohol abusers who quit	10%
% with adequate weight gains	20% increase

* Indicators refer to all pregnant adolescents ≤18 years who participate in the program.

Operational Level Objectives—Table 3
activity + target

An activity is what the program does; it describes how the program will function. Targets for operational objectives are usually short term. Operational level objectives may continue through the program with different targets each year, or a series of different operational objectives may be necessary, to be achieved in a sequential order.

Table 3. York County Program Operational Objectives, Year 1*

Activity	Target
% who receive one in-person encounter with a Resource Mother per week during pregnancy	90%
% visits during which education about the importance of prenatal care is provided	70%
% in need for whom transportation to prenatal services is provided	95%
% eligible who receive assistance obtaining financial support	85%
% assessed for issues that would benefit from counseling and support	100%
% who receive appropriate counseling and support for issues identified in the assessment	85%

* Activities refer to all pregnant adolescents ≤18 years who participate in the program.

Self-Review

At this point, we suggest you review some of the information that has been introduced. Space has been provided if you want to write your answers to the following questions. You can check your answers against those presented on pages 15–16.

How would you define each of the following terms?

Goal

Policy Objective

Program Objective

Operational Objective

Indicator

Activity

Target

Identify and describe the components of:

Policy Objectives

Program Objectives

Operational Objectives

Self-Review Answers

Goal: A goal is a broad statement of a desired health status. The statement is not necessarily put in measurable terms.

Policy Objective: An objective at the policy level is a specific, measurable statement about the desired extent of improvement in a health status problem.

Program Objective: An objective at the program level is a specific, measurable statement of desired change in knowledge, behavior, biomedical measures or other intermediate characteristics that are expected to occur because of the intervention and before the policy objective can be achieved.

Operational Objective: An objective at the operational level is a specific, measurable statement of an activity to be carried out by the program or intervention.

An **indicator** is an expected program outcome that corresponds to health and related conditions of the population.

An **activity** is what the program does.

A **target** is a numerical value that indicates the minimum desirable level of achievement for a particular activity or indicator. The target usually has two parts:

- Quantity or amount
- Date of anticipated achievement

A **Policy Objective** is composed of an indicator and target(s).

A **policy level indicator** is an expected program outcome that corresponds to the health status (and related conditions) in the community in which the program will operate. The indicators represent the health of the population, not program activities.

The **target** is long term. Usually, one cannot see results in the short term. The date in the target is usually understood to be the life of the program although it can be less; if it is, it must be stated as such.

A **Program Objective** is composed of an indicator and target(s).

A **program level indicator** is a program outcome that corresponds to specific biochemical measures, knowledge, attitudes, or behaviors in the population for whom the program is intended. As with policy objectives, the date in the **target** is usually the life of the program, although it can be earlier. If it is, it must be stated as such.

An **Operational Objective** is composed of an activity and target(s).

An **operational level activity** is a statement about what will be done as a part of the program. **Targets** for operational objectives are usually short term. Operational level objectives may continue through the program with different targets each year, or a series of different operational objectives may be necessary, achieved in a sequential order.

How do I construct program hypotheses?

Construction of program hypotheses involves four steps. The steps are described below, using the Low Birthweight Prevention Program in York County as an example. As you progress through the steps, refer to *Figure 5* to identify precursors of LBW and to *Figure 7* for an example of matching the precursors with the program's objectives.

1

State the goal, and then

State the indicators of the policy objectives and their expected direction of improvement.

*Recall that the policy objectives indicate improvements you expect to see in the **problem** itself.*

2

Identify the activities of the program which correspond to the operational objectives. The activities address precursors in the problem diagram. In our example, the program's activities address:

Barriers to use of prenatal care

Lack of social support

3

Identify the indicators of program objectives from the precursors in the problem diagram. These are the precursors that connect the problem to the precursors addressed directly by the intervention. In the York County case, they are:

Lack of early, continuous, and comprehensive prenatal care

Behavioral risks

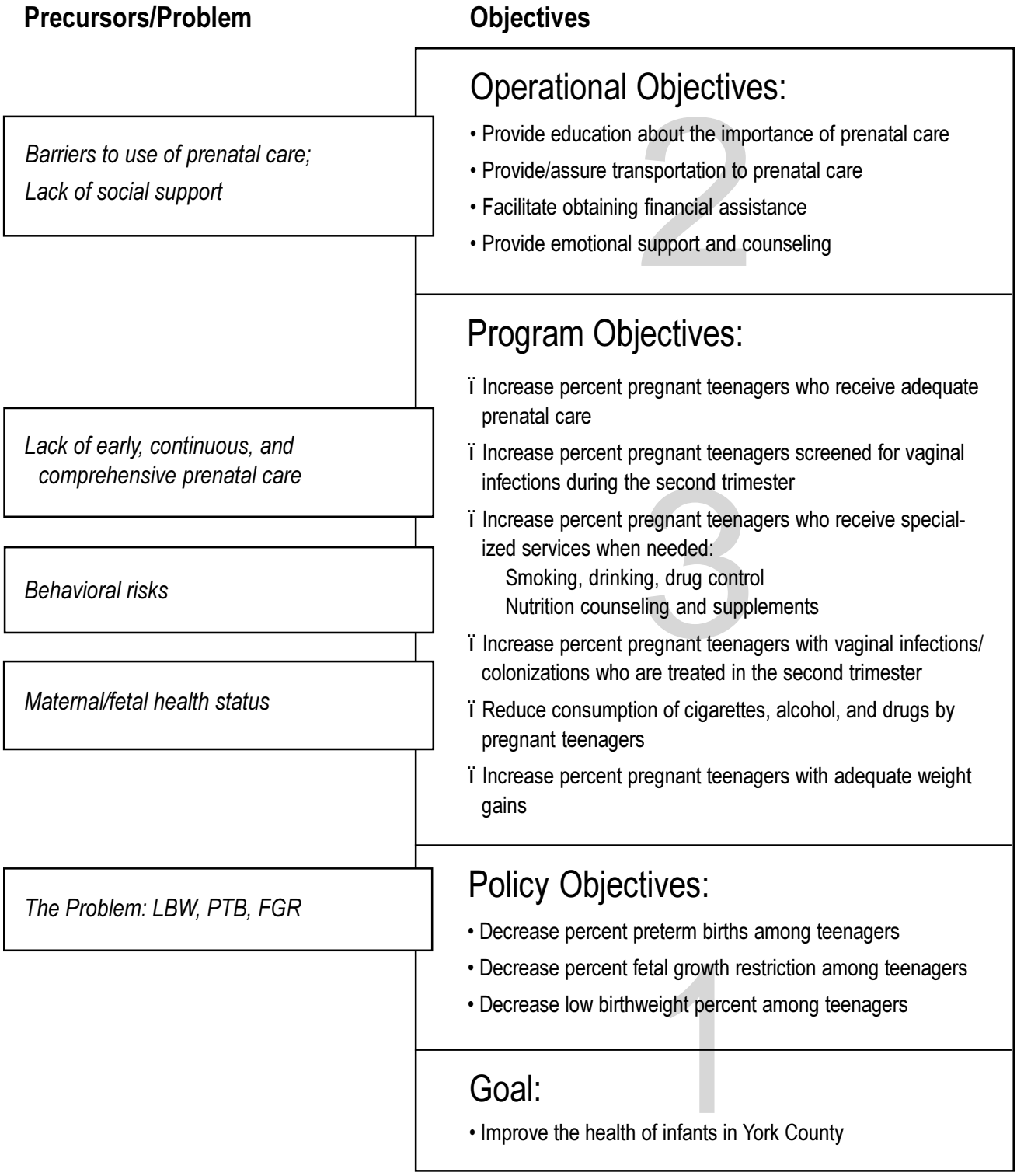
Maternal fetal health status

The anticipated direction of improvement (e.g., increase, decrease) should then be given for each of these indicators.

4

Place the identified objectives in a diagram, as shown in *Figure 6*, and use arrows to depict the relationships among them. It is a matter of following the logical sequence of steps in the problem diagram to form the sequence of objectives. You will then have your program hypotheses.

Figure 7. Correspondence Between Precursors/Health Problems and Objectives



How do I determine reasonable targets?

The targets of your objectives are the standards against which the program's progress will be measured. Targets can be presented as:

- A date of expected achievement;
- An absolute quantity, such as "1" or "7;"
- A percent or proportion increase or decrease.

Timeframes

There are some special considerations with regard to using a date as a target. Policy and program objectives, for example, usually have a long-term time frame. In *Tables 2* and *3*, the time frame (three years) is stated in the titles. Thus it is not necessary to give a date in the target column. If, however, one of the objectives were expected to be achieved before three years, then a date would be given. Operational objectives are usually written for shorter time frames, a year or less. In this case a date target is useful.

The shorter time frame for operational objectives is an important concept. In order to realize the outcomes represented by program and policy objectives, a project may have many operational objectives. Some operations (activities) may continue throughout the life of the project, perhaps with different targets each year; others may start at the beginning and be targeted for completion before the project terminates; still others may not begin until a year or more has elapsed. As a result, the operational objectives (activities and/or targets) may change each year (or in other short time periods) while program and policy objectives are more likely to stay the same throughout the life of the project.

Numbers, Percents, Proportions

In addition to selecting timeframes, you will usually have to decide on reasonable amounts of activities and indicators to target within given time periods. You may choose to set specific percentages (*e.g.*, 60%) or numbers (*e.g.*, 200) as your targets, or you may decide to state your targets in terms of an increase or decrease (*e.g.*, 25% increase). The latter choice implies that you have a baseline value against which you can compare the value that you observe after the program has operated for a while. If baseline data are not available, do not use the terms *increase* or *decrease.* Rather, set your targets at levels that seem reasonable, based on the information available to you. In such situations, it may be wise to collect baseline data for a few months while your program is starting up.

The most difficult aspect of setting targets is identifying desirable quantities. You will find it useful to consult a variety of references. When targets are absolute numbers of program activities, such as the number of encounters with clients, your own previous experiences and those of experts should provide useful insights. These sources may also be helpful when estimating the percentage of change for indicators of program and policy objectives. Relevant literature in the field, such as evaluations of similar programs, time studies, and patient flow analyses can also help you make these decisions.

Recognized standards can also guide decisions about targets. Standards represent optimal levels of health conditions or health services. Two particularly useful compendia of standards are:

- *Health People 2010* (US Department of Health and Human Services); and
- *Model Standards: A Guide for Community/ Preventive Health Services* (American Public Health Association).

Many states and some localities have developed similar documents for their own populations.

The targets in these standards are often generated statistically from historical trends of specific outcomes; projections are based on the continuation of the trends (trend analysis using linear regression). The projections can be used as a starting point to set targets for a specific program. One example, the *North Carolina Chartbook on Population and Health,* contains trend data for numerous outcomes and statistical projections based on those trends. If you were setting targets for a program designed to impact the motor vehicle death rate for children under the age of 15 in North Carolina, you would want to see the projected rates for North Carolina for the next few years. You would then consider your program's probable impact on these projections. One way to do this is to consult the literature on the impact of similar programs.

Since your situation is not exactly like any other, decisions about using reference data to help you set targets should be guided by your program's special circumstances. If your population is at greater risk than the one on which a reference evaluation was based, you will have to adjust your expectations accordingly. That is, the results of your program may not be as dramatic as they were for a population at lower risk. Another consideration in target setting is start-up time. All programs require some start-up time when services are not yet fully operational. During these times, objectives should not be expected to achieve their optimal levels. While it is tempting to "wow" a potential funding source with promises of quick and extensive results, it is likely to be of greater advantage to you in the long run, to take a more realistic approach. You may also be aware of political or administrative reasons to adjust your best target estimates up or down. High targets are sometimes used as incentives for staff; low targets may be set to

impress political or financial overseers with your stellar achievement. Both ploys are acceptable, as long as the targets are within a credible range.

Moving on to Programming and Implementation

In this manual you learned how to develop program hypotheses and construct measurable objectives. While objectives occupy very little space in a program plan, they are the essence of the plan, and the first stop for a thoughtful reviewer. Their importance to the success or failure of your efforts to secure support for a program proposal cannot be underestimated. The objectives also form the basis for the next two steps in the program planning process. They will guide you in designing the program, developing an implementation plan, and constructing a budget, all of which are covered in the *Programming and Implementation* manual. Later, they will provide the framework for monitoring and evaluation, as you will see in the last manual in this series, *Evaluation: Monitoring Progress Towards Achievement of Objectives.*

Practice

You can practice developing program hypotheses with any of the following problems: motor vehicle cash injuries in children 0–6 years, frequent asthma attacks among children with asthma, limited mobility among children with special health care needs, and HIV positive status in women of childbearing age.

For each problem, some background information and a problem analysis diagram is given. Using the problem diagram, construct one or more program hypotheses. Some hints to facilitate your work are given with each diagram. The steps required to construct program hypotheses are on pages 17 and 18. Use the framework on page 30 to proceed through steps 1–3. Then, for step 4, place your objectives into the diagram on page 31 and indicate the relationships between the objectives. If you wish to practice on more than one problem, copy the worksheets on pages 30 and 31 before you begin.

Practice

Motor vehicle crash injuries in children 0–6 years

City Council members were alarmed when informed by the Public Safety Office that the motor vehicle crash injury rate for children 0 to 6 years old in their city was twice the state rate. They immediately asked public safety officers to analyze this problem and report back with suggestions to decrease the motor vehicle crash injury rate in children between birth and six years of age. This is the diagram of the analysis submitted to the City Council.

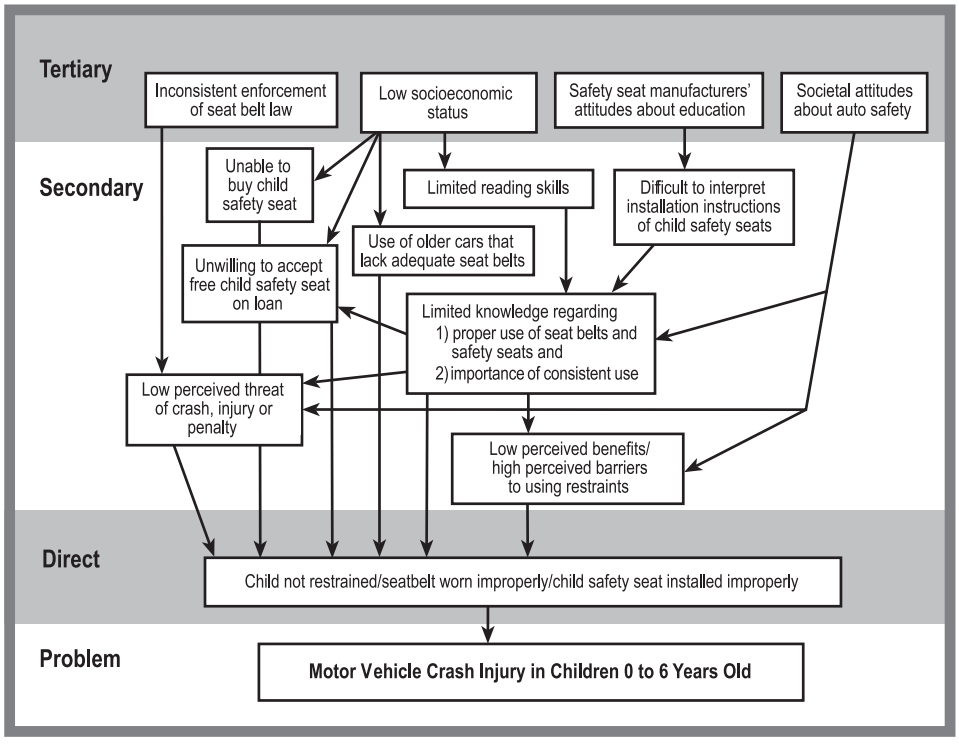
Public Safety officials found a low level of knowledge about the consistent use of child safety seats and seat belts. Many parents were unaware of standard brochures used to educate the public about restraints. Limited reading skills were common among these parents. In addition, car safety seats were often installed incorrectly. Most instructions for installing car seats were written at a high school reading level. With this in mind, Public Safety officials advocated an educational campaign to increase child restraint use within the city. The campaign will include development and widespread distribution of low literacy, culturally sensitive written materials, and development and broadcasting of public service announcements.

Hints: 1. You know the problem which will determine your policy objective.

2. You know the two precursors that the program will address.

3. Four program activities have been identified.

4. Your hypotheses should include one goal, and one policy, eight program, and four operational objectives.



Practice

Frequent asthma attacks among children with asthma

The nurse at your child's elementary school was alarmed by the frequency of absences among children with asthma. Although these children account for only 10% of the school population, they contributed over 60% of the school absences and averaged 7.6 days absent/year versus 2.5 days absent/year for children without asthma.

After discussing this with school administrators, the nurse decided to conduct a survey of children with asthma and their families to determine the cause of this disparity. Questions were asked to determine knowledge of the etiology, management, and treatment of asthma. Parents were also asked to provide the frequency of their child's asthma attacks.

Survey results demonstrated that the frequency of asthma attacks was positively correlated with school absence. In addition, children of families with adequate knowledge and appropriate expectations about asthma had fewer asthma attacks. The school nurse concluded that children with asthma and their families generally had a poor understanding of the etiology, management, and treatment of asthma.

Based on these results, school administrators agreed to implement an educational program for children with asthma and their families. The program will involve personal communications with every family of a child with asthma. Each family will receive a booklet with background information about asthma and guidance for successful management of the condition. This information will be reinforced and elaborated upon during week-end workshops held twice each school year.

Hints: 1. You know the problem which will determine your policy objective.

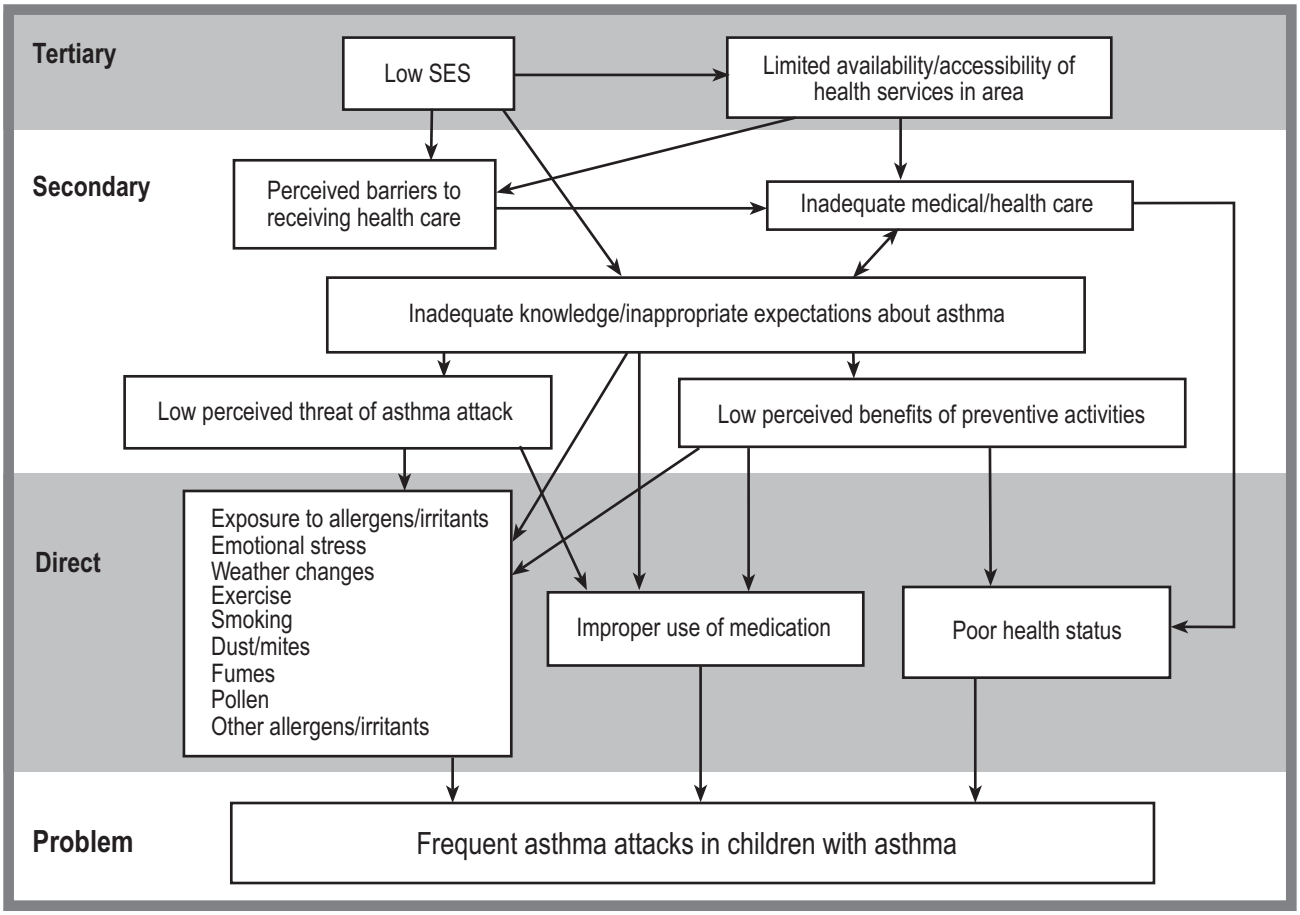
2. You know the precursor the program will address.

3. Three program activities have been identified.

4. Your hypotheses should include one goal, and one policy, six or seven program, and three operational objectives.

Practice

Frequent asthma attacks among children with asthma



Practice

Limited mobility among children with special health care needs (CSHCN)

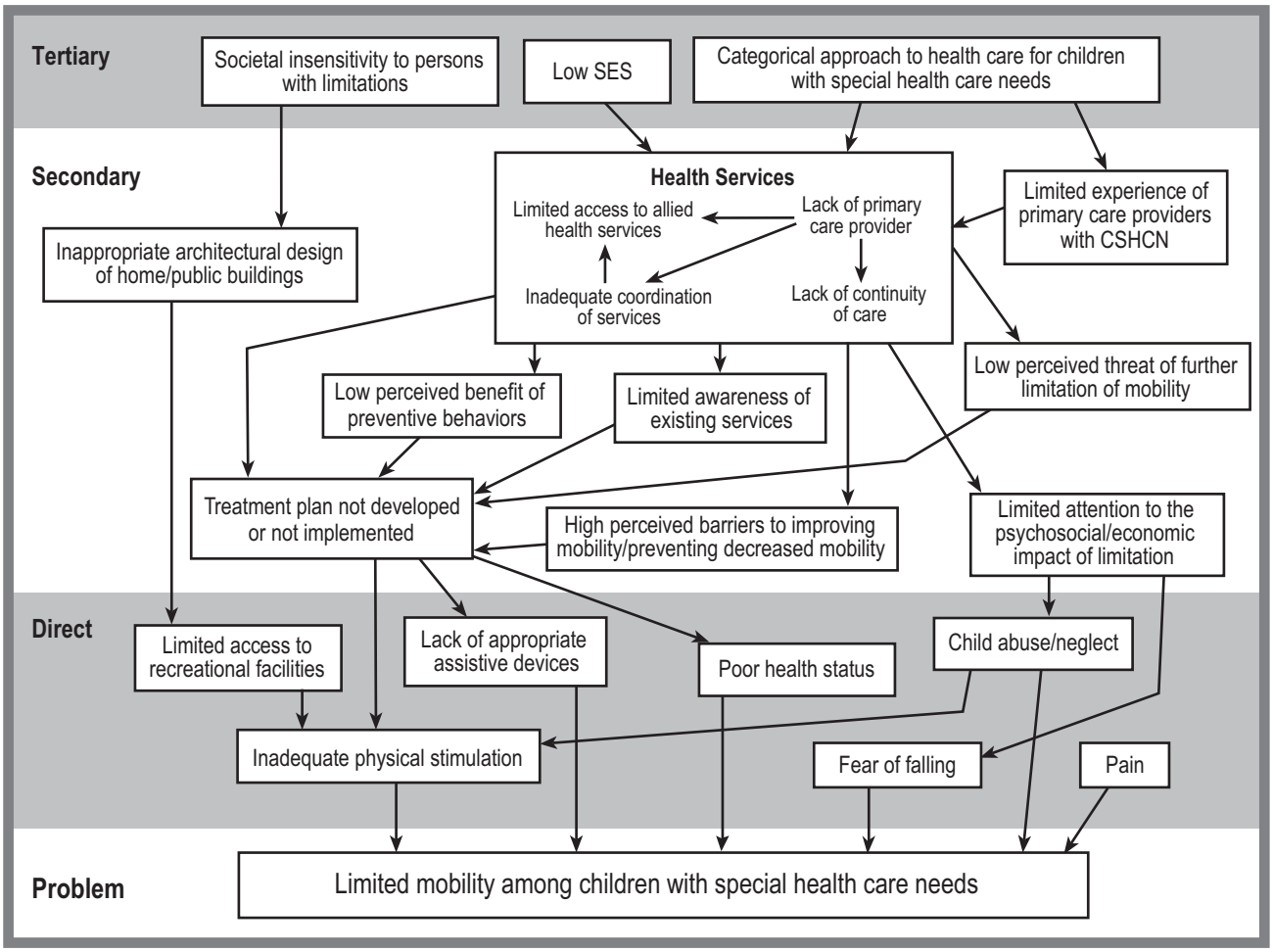
Providers in a multi-specialty clinic serving many children with special health care needs (CSHCN) observed that these children often develop mobility limitations that are secondary to their primary conditions. The specialists contacted your state's program for children with special health care needs to inquire about this issue, and they discovered that the state was about to convene a task force to look into acquisition of secondary conditions in this population. Two members of the clinic staff joined the task force. Secondary conditions, such as mobility limitations, have received relatively little attention by researchers, but some potential precursors could be identified from the literature. This information was supplemented by interviews with other providers and CSHCN policy analysts, and surveys of parents of children at risk.

The diagram of the problem is on the next page. Particular concerns of parents were limitations in the continuity and coordination of health services for their children and difficulties accessing allied health services to meet their children's complex needs. Many of the children were followed only by the specialists appropriate to their primary medical conditions and did not have a regular primary care provider to act as a coordinator of the many services they needed. Interviews with primary care providers suggested that they lacked confidence in their abilities to manage the complex health care needs of this population. Specialists indicated that they did not see a role for primary care providers with this population. All of these factors appear to be related to a condition-specific categorical approach to funding services for CSHCN, and they contribute to insufficient development or implementation of treatment plans.

As a result of this analysis, the state decided on three courses of action. First, a primary care provider will be identified for each child with special health care needs. Second, supports for primary care providers will be made available. Supports will include continuing education programs, a referral resource guide (including family support groups, sources for assistive technology, and allied health services), and an "800" number for immediate consultation. The third part of the intervention involves an annual presentation to each relevant professional specialty group about the importance of primary care for this population. The program will be phased in beginning with the CSHCN population in the multi-specialty clinic where the problem was observed.

Practice

Limited mobility among children with special health care needs (CSHCN)



Hints: 1. You know the problem which will determine your policy objective.

2. You know the precursors the program will address.

3. Three program activities have been identified.

4. Your assessment of this problem (see the manual "Assessment of Health Status Problems") suggested that the following precursors were not excessive among CSHCN in your state: poor health status, fear of falling, child abuse and neglect, pain, and high perceived barriers to improving mobility/preventing decreased mobility. No data were available on these precursors: inappropriate architectural design of home/public buildings, limited experience of primary care providers with CSHCN, limited attention to the psychosocial/economic impact of the limitation.

5. Your hypotheses should include one goal, and three policy, seven program, and three operational objectives.

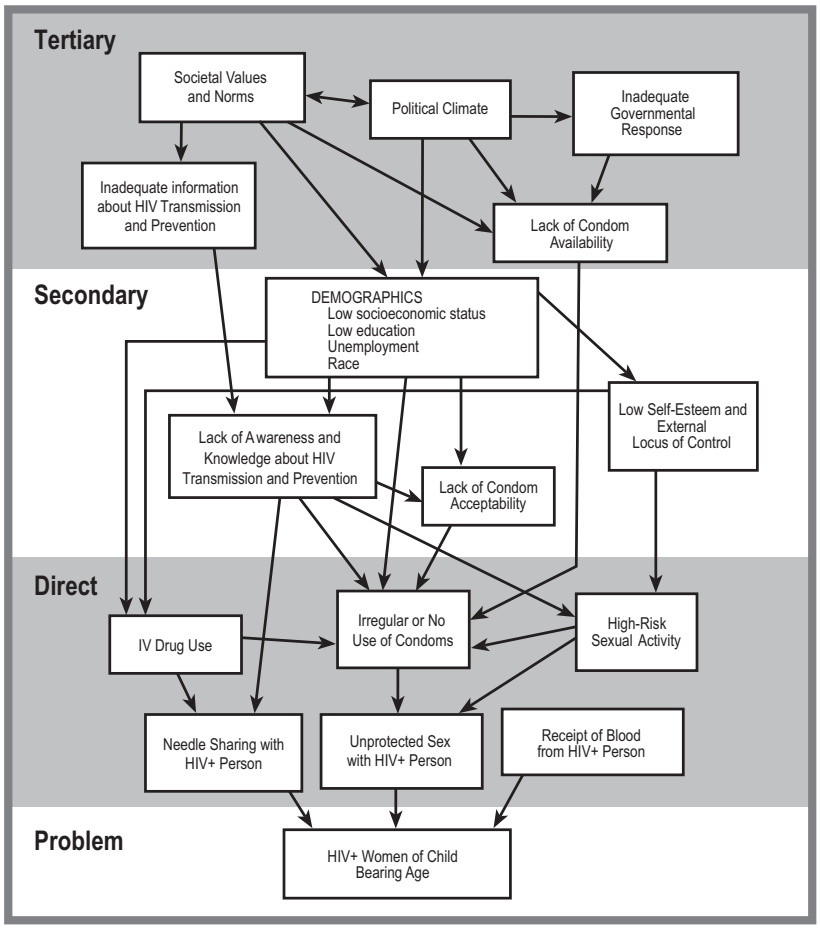
Practice

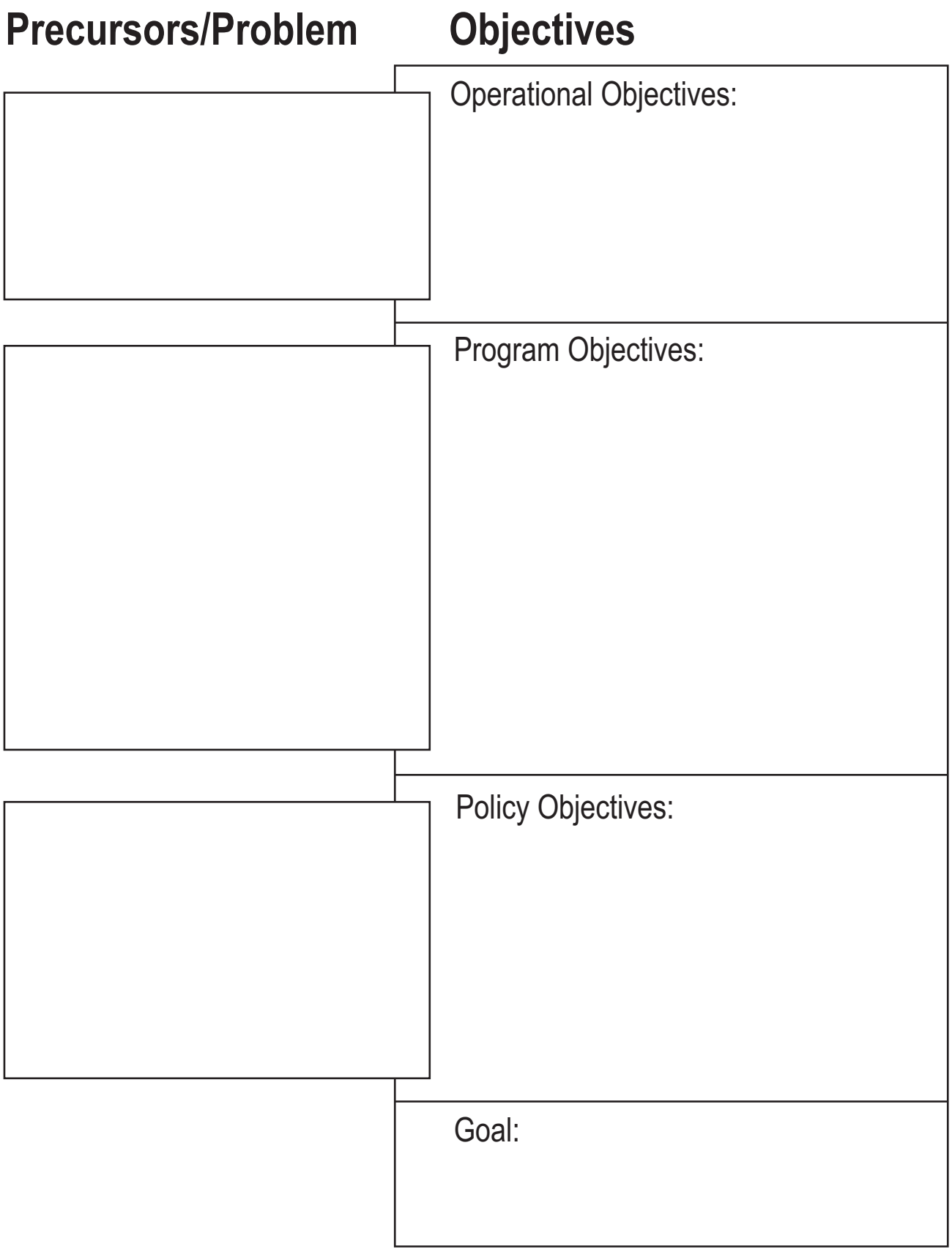
HIV+ status in women of childbearing age

In your county, women increasingly are infected with the Human Immunodeficiency Virus (HIV). Many of these women go on to develop Acquired Immune Deficiency Syndrome (AIDS). You have been asked to design a program to address this problem. A problem diagram is shown here. Your program will intervene at two precursors: lack of condom availability and inadequate information about HIV transmission and prevention. This program will be community based. Outreach workers in your community will provide information on HIV transmission and prevention to women of childbearing age. Condoms will be distributed as well as instructions on their use. In addition, women who might be intravenous drug users will receive information and training on needle cleaning.

Hints: (You have been given a lot of information to help you get started.)

1. *You know the problem which will determine your policy objective.*
2. *You know the two precursors that the program will address.*
3. *Three activities of the program have been identified.*
4. *Your hypotheses should include one goal, and one policy, four program, and three operational objectives.*




Precursors/Problem
Objectives
Operational Objectives:
Program Objectives:
Policy Objectives:
Goal:

Program Hypotheses

Practice answers

Motor vehicle crash injuries in children 0–6 years

Precursors/Problem

- Limited reading skills
- Difficult to interpret installation instructions of child safety seats

- Limited knowledge regarding
  1) proper use of seatbelts & safety seats;
  2) importance of consistent use
- Low perceived threat of crash, injury, or penalty
- Low perceived benefits/high perceived barriers to using restraints
- Child not restrained
- Seat belt worn improperly
- Child safety seat installed improperly

- Motor vehicle crash injury in children 0 to 6 years old

Operational Objectives:

- Develop a low literacy and culturally sensitive guide to seat belt use and appropriate child safety seat installation and use
- Distribute guides at county offices, supermarkets, community centers and physician's offices
- Develop community service messages informing community members about the importance of child restraint and locations of free safety guides
- Broadcast community service announcements

Program Objectives:

- Increase knowledge regarding proper use of seat belts and safety seats and importance of consistent use
- Increase perceived threat of crash, injury and penalty
- Increase perceived benefits of using restraints
- Decrease perceived barriers to using restraints
- Increase percent of children 4 to 6 wearing their seat belts correctly
- Increase percent of children restrained on every trip in a motor vehicle
- Decrease percent of children ≤ 3 riding in improperly installed child safety seats

Policy Objectives:

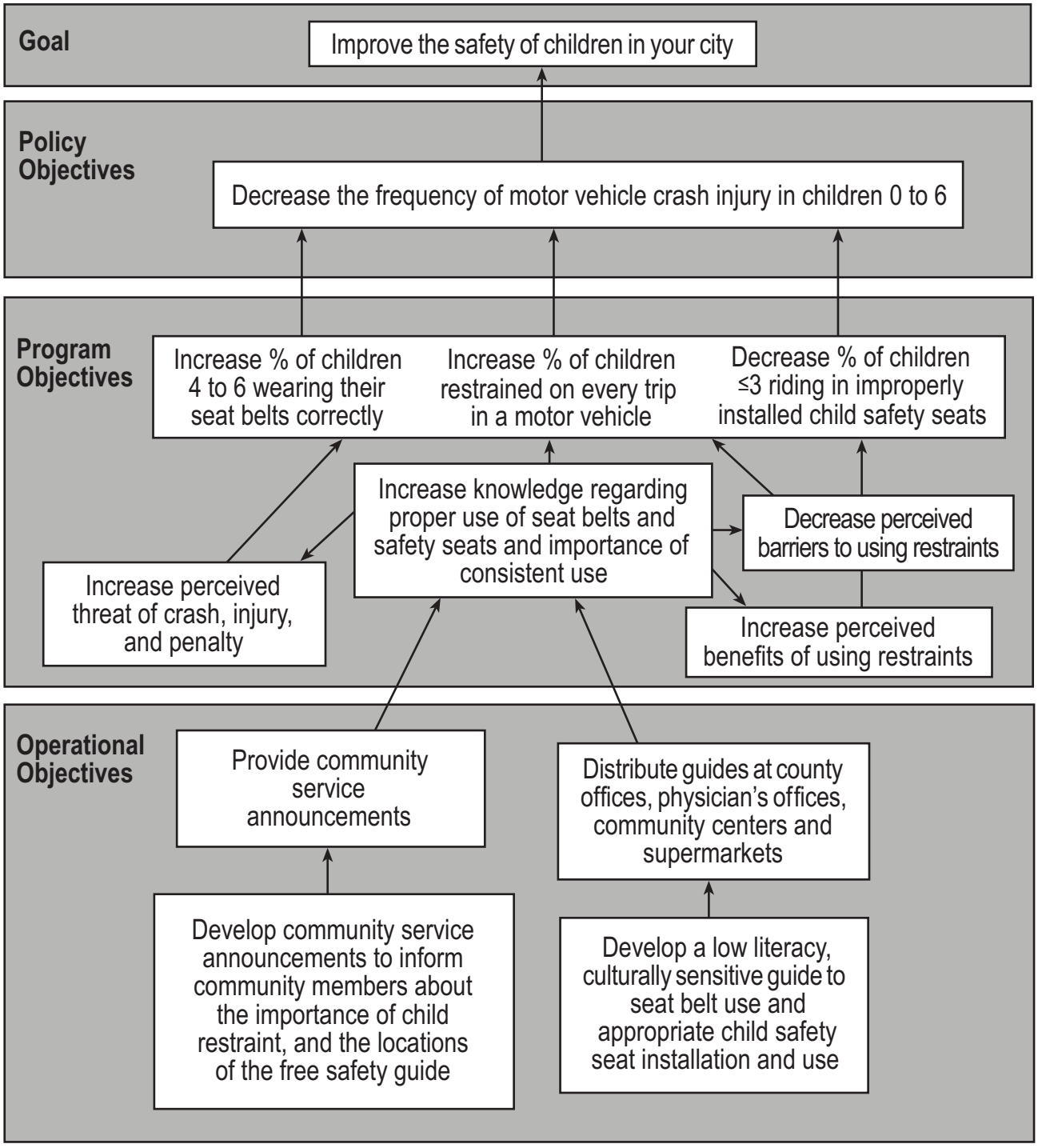
- Decrease percent of children aged 0 to 6 injured in motor vehicle crashes

Goal:

Improve the safety of children in your city

Practice answers

Motor vehicle crash injuries in children 0–6 years



Practice answers

Frequent asthma attacks among children with asthma

Precursors/Problem

- Inadequate knowledge/inappropriate expectations about asthma

- Inadequate medical/health care
- Low perceived threat of asthma attack
- Low perceived benefit of preventive activities
- Exposure to allergens/irritants
- Improper use of medication
- Poor health status

- Frequent asthma attacks

Operational Objectives:

- Send a personal communication to every family of a child with asthma
- Distribute a booklet to these families addressing issues of school age children with asthma
- Conduct two weekend workshops per school year regarding asthma management, treatment, and prognosis

Program Objectives:

- Increase percent of families that have adequate knowledge and appropriate expectations about asthma
- Increase percent receiving adequate medical/health care
- Increase percent perceiving threat of asthma attack
- Increase percent perceiving benefit of preventive activities
- Decrease percent exposed to allergens/irritants
- Decrease percent improperly taking medications

Policy Objectives:

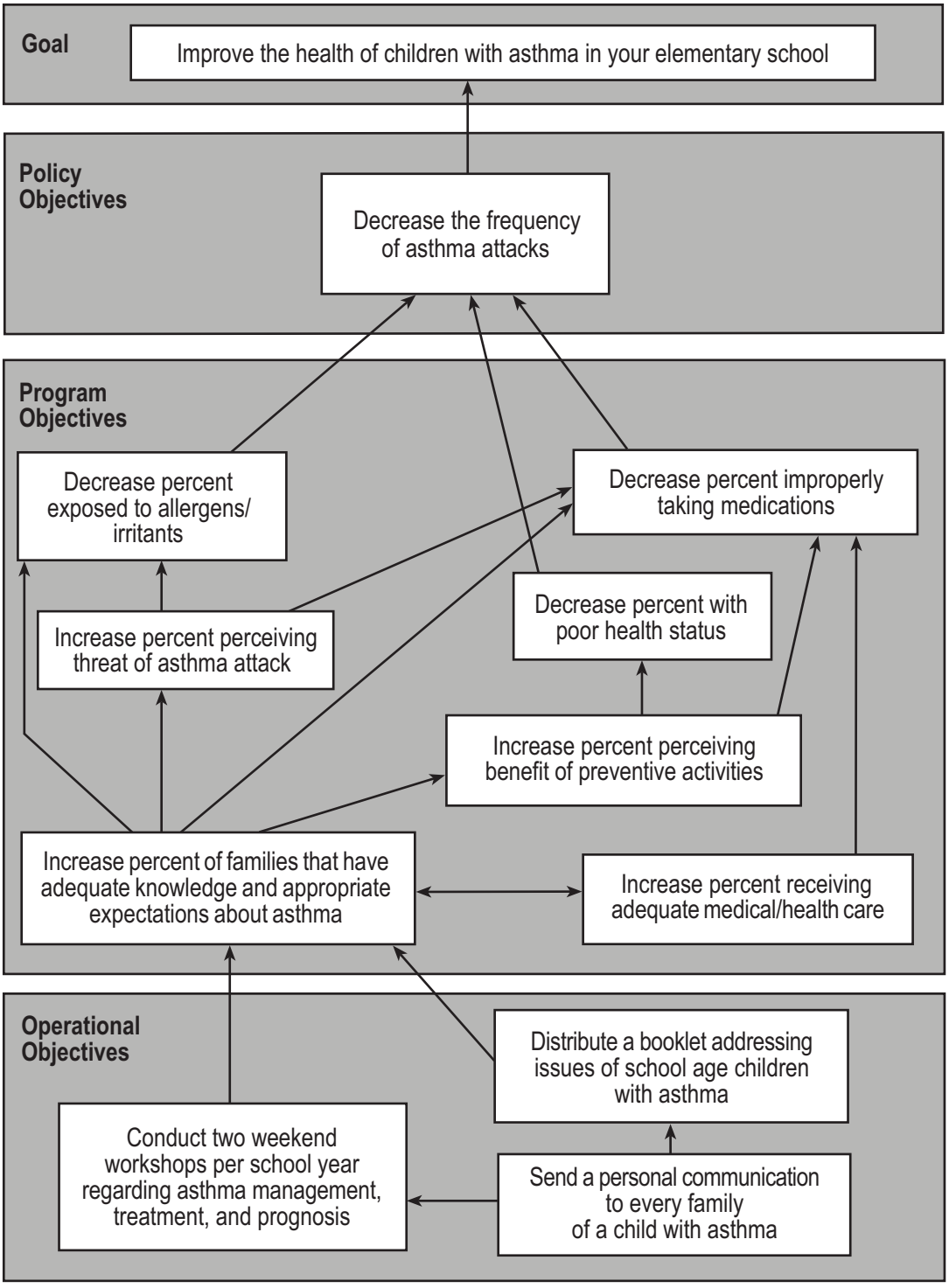
- Decrease the frequency of asthma attacks

Goal:

- Improve the health of children with asthma in your elementary school

Practice answers

Frequent asthma attacks among children with asthma



Practice answers

Limited mobility among children with special health care needs

Precursors/Problem

- Lack of primary care provider
- Limited experience of primary care providers with CSHCN

- Lack of continuity of care
- Inadequate coordination of services
- Limited access to allied health services
- Low perceived threat of further limitation of mobility
- Low perceived benefits of preventive behaviors
- Limited awareness of existing services
- Treatment plan not developed or not implemented

- Lack of appropriate assistive devices
- Inadequate physical stimulation
- Limited mobility

Operational Objectives:

- Link CSHCN to a primary care provider
- Provide support to primary care providers treating CSHCN
  - Continuing education
  - Referral resource guide
  - 1 (800) number
- Educate specialty care providers regarding the importance of primary care
  - Speak one time per year at professional meetings

Program Objectives:

- Increase % of CSHCN with primary care providers
- Increase % of CSHCN accessing appropriate allied health services
- Increase % of families of CSHCN that perceive a threat of further limitation of mobility
- Increase % of families of CSHCN that perceive benefits of preventive behaviors
- Increase % of parents of CSHCN aware of existing services
- Increase % of CSHCN with a developed and implemented treatment plan

Policy Objectives:

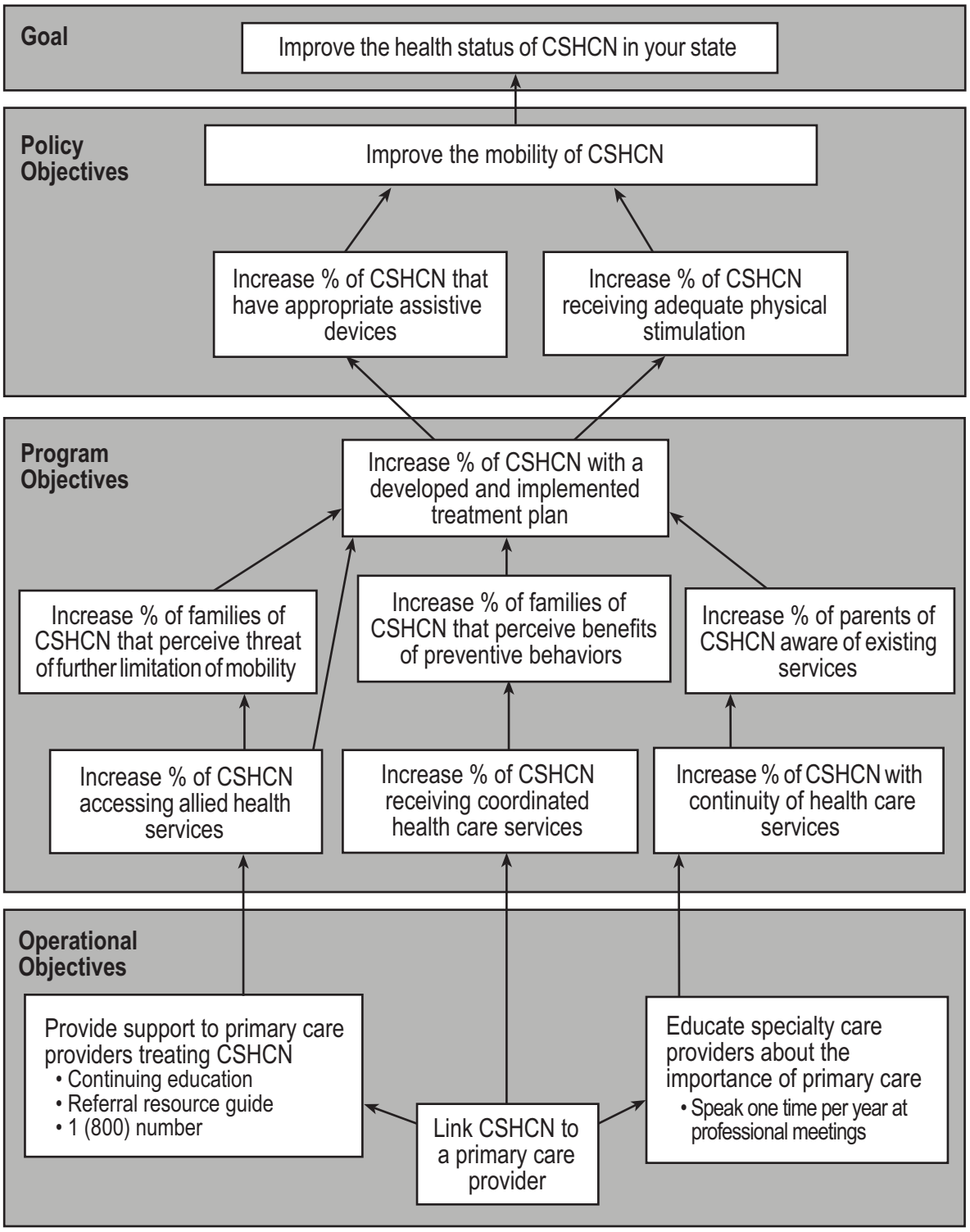
- Increase % of CSHCN that have appropriate assistive devices
- Increase % of CSHCN receiving adequate physical stimulation
- Improve the mobility of CSHCN

Goal:

- Improve the health status of CSHCN in your state

Practice answers

Limited mobility among children with special health care needs



Practice answers

HIV+ status in women of childbearing age

Precursors/Problem

Lack of condom availability

Inadequate information about HIV transmission & prevention

Lack of awareness and knowledge about HIV transmission and prevention

Irregular or no use of condoms

Unprotected sex with HIV+ person

Needle sharing with HIV+ person

HIV+ Status

Operational Objectives:

- Distribute condoms and instructions on use
- Provide information on HIV transmission and prevention
- Provide information and training on needle cleaning to women IV drug users

Program Objectives:

- Increase percent of women who are aware and knowledgeable about HIV transmission and prevention
- Increase percent of women initiating condom use
- Decrease percent of women engaging in unprotected sex with HIV+ persons
- Decrease percent of women IV drug users sharing unclean needles with HIV+ persons

Policy Objectives:

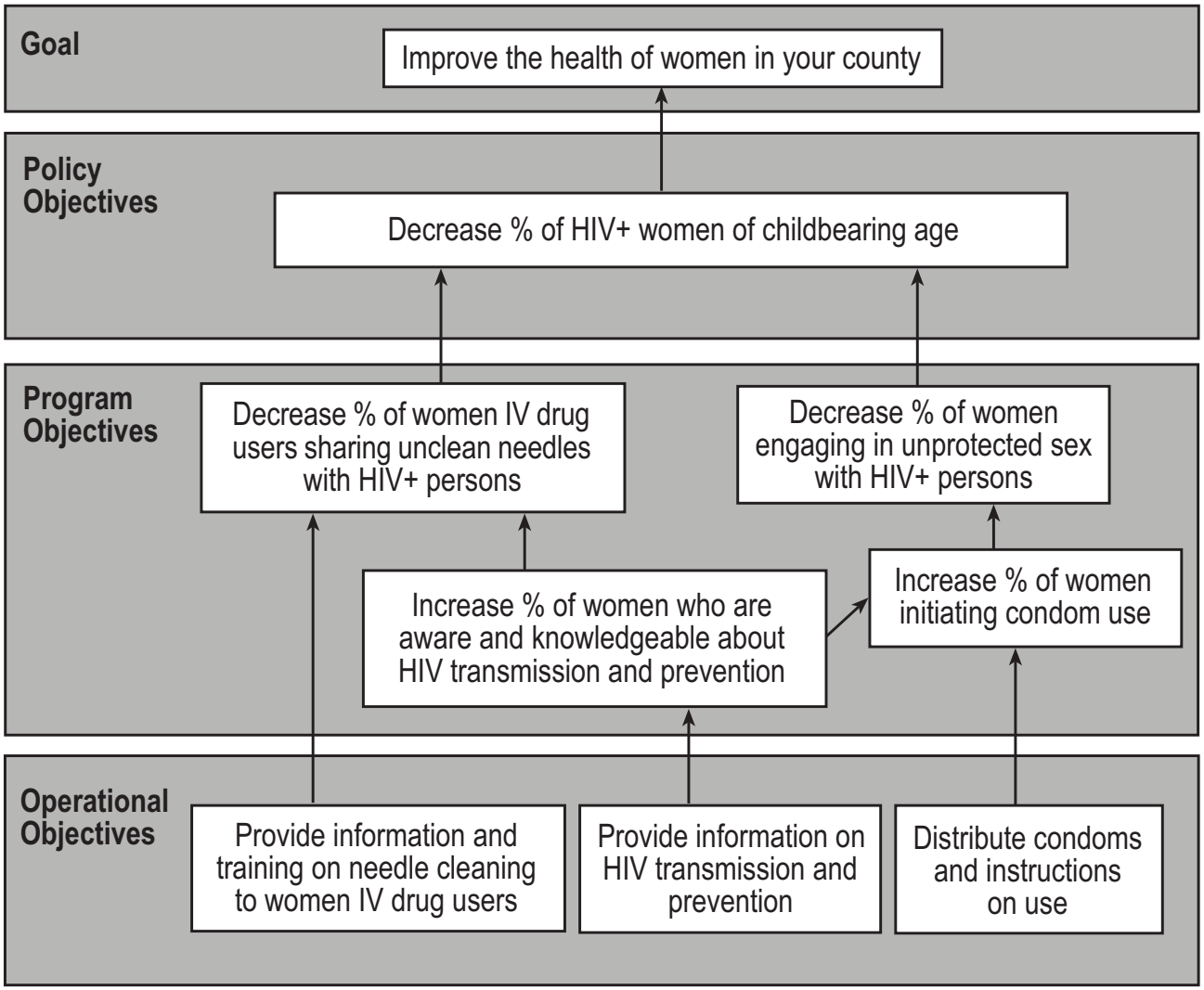
- Decrease percent of HIV+ women of childbearing age

Goal:

- Improve the health of women in your county

Practice answers

HIV+ status in women of childbearing age



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