

## Preparation

### *Create your partnership*

There may be several individuals and organizations that can assist you in the design, plan and implementation (or putting into action) of your provider reminder and education systems training. Provider education interventions have been implemented with the assistance of a wide range of partners.

Example partners to help you implement your provider education intervention:

- community coalition (advisory committee)
- head start
- urban league
- local libraries
- parents
- medical professional organizations
- veterans affairs medical center
- schools
- health department
- voluntary agencies
- media
- university
- hospital
- vaccine manufacturers
- doctors
- nurses
- physician assistants
- insurance companies
- health centers
- medical residency programs
- early childhood workers
- community agencies
- private businesses
- local champions
- faith based organizations
- public health organizations

Try to think of partners that can serve a variety of roles. For example, you may need certain partners to help you create your immunization messages (e.g., health departments, medical schools), while some partners may be more helpful in ensuring providers have incentives to utilize their training (e.g., insurance companies).

Don't forget to consider partners that may help you with evaluating your intervention. To evaluate a provider education intervention, or any other intervention, it is often useful to seek out technical assistance from local colleges, universities or others with this experience. These may also be partners that you consider engaging in designing and planning your intervention from the very beginning.

For more information on engaging partners, go to [Partnerships](#).

## ***Identify your population***

Before you start your intervention, you should develop a good idea of both the setting(s) and population(s) that your intervention will be working with. Settings are where the intervention is going to take place (clinics, schools, hospitals, etc.) while populations are the specific types of providers that the intervention is targeting. It is important to develop intervention messages and materials that are appropriate for both the settings and populations that you are dealing with.

Provider education may be provided in both urban and rural communities in a variety of settings including:

- health maintenance organizations
- university based clinic
- health centers
- private medical practices
- hospitals
- nursing homes/long term care facilities
- residency programs - family practice residence, pediatric
- schools
- worksites
- faith-based organizations

For more information on settings for immunization-related interventions, go to [Immunizations in Different Settings](#).

As you start to consider developing your provider education intervention it is important to decide to whom you want them to provide information and counseling. The answers to the questions below will influence the information you include in your provider education.

- Do you want them to focus on those at who engage in certain risky behaviors, those with certain existing health conditions, or the population as a whole?
- Do you want them to focus on infants, children, adolescents, adults, elderly?
- Are there subgroups within this population?
- What are the shared social and cultural characteristics of the population the provider will be serving?
- What are the geographic boundaries? Are there differences in access to immunizations or beliefs about immunizations in different settings?

Provider education can also focus on a variety of health care providers including:

- doctors (general practitioners, cardiologists, obgyn, etc.)
- nurses
- mental health care providers (psychiatrists, psychologists, etc.)
- school nurses
- physician assistants

Remember that there are also differences among providers in terms of age, gender, race, ethnicity, nationality, religion, etc. These differences will influence their ability to integrate the information you provide, and the provider's ability to engage the

different populations you want them to influence. Tailoring intervention messages to fit each of these providers will improve the likelihood of success for your intervention.

### ***Record your intervention goals and objectives***

If you and your partnership have not formed your intervention goals and objectives, you will need to work with your partners to do so. Although you may refine your goals and objectives, it is important to start with some idea of what you want to accomplish for this intervention. Provider reminder and education systems provide cues and training to support health care professionals in counseling or advising their patients or clients about immunizations. These systems can assist health care professionals in assessing the patient's or client's health needs as well as delivering the appropriate immunization recommendations.

An example of a goal and objective for a provider education intervention aimed at increasing immunizations might be:

- Goal: Increase the influenza immunization rate in your community .
- Objective: Increase by 25% the proportion of primary care physicians who encourage their elderly patients to obtain influenza immunizations.

With provider education, as with other efforts to promote immunization, it is important to set attainable and realistic goals and objectives. This usually requires having a good idea of the providers needs and may require the development of intermediate outcomes such as changes in attitudes or readiness to encourage immunizations.

It may be helpful to create a logic model to organize your goals, objectives and the action steps to meet your goals and objectives. Some funding sources have very specific logic models for your partnership to use, so be aware of different requirements. For more information on developing goals and objectives, visit [Preparing for Your Intervention in Readiness and Preparation](#).

### ***Assess your community capacity and needed resources***

Provider education comes in a variety of shapes and sizes and requires different amounts and types of resources. The specific resources required will likely vary depending on the type of reminder system developed, the place or medium for training, training curriculum, number of participants, and number of trainers present. For example, you may want to have training classes at a health care facility. For these, you may need to have access to a copy machine or a printing facility to create materials for the participants or to share existing resources with the participants. If you have a large number of trainees, you may need to have access to multiple rooms and trainers. You may also need to have audiovisual equipment to teach some of the components of the training curriculum. Alternately, you may want to design an on-line reminder and training system. This will require additional technological resources and skills.

You may consider creating a resource management plan, in which you review your current resources and resource requirements and identify at what points in the

intervention you will need these specific resources. As you develop your budget, be sure to incorporate the costs for these types of resources.

Some technologically advanced provider education systems (e.g., computer reminder systems) are expensive to implement, however, lower cost interventions have been developed (e.g., faxes to physician offices, reminder stickers in charts or posters).

Provider education interventions many require a lot of personnel and training time. Provider time is necessary to participate in training, implementation, or follow-up during office visits, by phone or mail or e-mail. Staff time and training are necessary to support implementation of counseling and advice to individuals and to conduct follow-up (e.g., chart preparation, audits of patient records, relaying feedback to physicians, monthly testing of random samples of patients to ensure improvement in outcomes, etc.). Furthermore, time is needed during office visits to allow for delivery of advice and there may be other competing concerns that need to be addressed in this time period.

To save time and money, it is helpful to find partners who have already received this training. If this is not possible, you may have to provide your own training on topics like: health risks associated with immunization, communication strategies regarding non-judgmental feedback and reinforcement, how to build cultural competence, how to help individuals with problem solving strategies, proper counseling attitude, community resources, and maintaining confidentiality.

You may need to consider additional equipment and resources for both training and intervention. You may need other equipments such as video recorders, players and tapes to provide visual immunization educational information to providers. For provider reminders, computers and software programs may be needed to generate reminders for providers to counsel their patients on certain immunization related issues. Provider education systems such as prompt sheets and training sessions can be developed at a relatively low cost and can be done on-site. Provider education interventions may use incentives for providers to implement education into standard practice. Lastly, other various supplies may be needed to conduct immunization simulations with providers.

Provider reminder and education systems may also require certain trainer skill sets (e.g., stages of change model, brief behavioral counseling and communication) depending on the curriculum that gets used. For example, it will likely be necessary to have trainers skilled at helping providers understand how to communicate with patients, use public health theories of behavior change, and translate immunization recommendations into individual patient goals and plans. Space, equipment and materials are needed to conduct trainings and workshops for providers. You may also need to take into account the costs of providers implementing your recommendations for example reminder stickers or sheets for the patient's chart.

Likewise, evaluation of provider reminder and education interventions can be complex and may require assistance from researchers and other partners who have experience with study design, measurement development, data collection, data analysis or translation of research findings into practical implications for your community.

The [Readiness and Preparation](#) and [Capacity](#) sections provide information and resources to help you think about the resources you might need for your intervention. There are a number of tools and resources for use in training providers to counsel individuals to obtain immunization including provider prompts, behavioral counseling training, and others. For specific examples of tools and resources for immunizations that have been created and used by other communities, visit [Tools and Resources for Immunizations Provider Education](#).

### ***Design your intervention activities***

- *Design your provider education intervention strategies*

Think about what you want to prompt people to get from the provider education intervention and how you would like them to respond. For example, you may want doctors to provide their patients with counseling to obtain immunizations. You may also work with your partners to decide what changes in immunization rates are feasible based upon the amount of political and/or community support and available funding.

These interventions are most effective when characteristics of the providers are considered (see [Assessment and Prioritization](#)). This may require you to spend time with providers building relationships. Providers can help you identify the readiness to change as well as specific behaviors and outcomes that your intervention should address. Some provider education interventions have found it helpful to give providers lists of local referrals and resources to provide to their patients who may desire more in-depth information on immunization-related issues (e.g., risks, costs, benefits).

There are also several questions that you can consider when planning your provider reminder and education system, including:

- Will the training take place as part of a larger training program for health care professionals?
- Will the training be specific to health care organizations in the local area?
- How many participants will take part in the training?
- How many trainers or instructors will participate in the training? What will be their roles and responsibilities?
- Who will coordinate the training? Who else will be needed to assist in the training?
- How long will the training last? How many sessions will it include?
- Will you provide continuing medical education credits (CMEs)?

Many different types of provider education interventions have been used by others (go to [Tools and Resources for Immunizations Provider Education Interventions](#) to see how these have been used).

- *Create a timeline and assign roles and responsibilities*

Work with your partners to decide on the timeline for the intervention as well as who will be responsible for carrying out the intervention activities. Be very specific about roles, tasks and timelines to ensure that the intervention is implemented

successfully. Include information about when your intervention will be conducted and how you will recruit practitioners to be part of your intervention.

- *Create your training curriculum*

Training for provider education interventions may be conducted in multiple sessions or one. The training techniques have also been varied and may include:

- face-to-face lecture or presentation
- role play
- case review
- in service programs, grand rounds
- distribution of booklets, cd/dvd, or other materials
- video observation (e.g., modeling various communication patterns)
- newsletters
- pocket cards with information on immunizations
- ads in medical journals
- faxed or emailed information sheets

Provider education interventions may also cover a wide range of information. It is important to remember that offering a range of learning opportunities, including hands-on, practical experience may be the best way to train health care professionals. In terms of the curriculum, others have included:

- Effectiveness of provider advice in increasing immunization rates
- Indications for immunization
- Importance of immunization
- Guidelines for immunization
- Contraindications for immunization
- Identification of relevant ethical and professional concerns
- Methods to obtain reimbursement for immunization

It is also important to provide information to providers on how they can effectively interact with and advise patients or clients regarding immunizations. The training on interacting with and advising patients or clients may include:

- Assessing immunization status, related behavioral risk factors and health conditions
- Advising patients or clients by giving clear, specific, and personalized advice, including information about risks and benefits of various immunizations
- Working with the patient or client to select appropriate goals and methods of changing immunization -related behaviors based on their current patterns as well as their interest and willingness to change
- Helping patients or clients acquire the necessary skills, confidence, or social and environmental supports for obtaining immunizations
- Arranging ongoing support by scheduling follow-up contacts to provide ongoing assistance and support and to adjust the goals and plans as needed
- Developing reminder systems that will work for the health care practice

For the assessment of immunization status, related behavioral risk factors and health conditions, it is helpful to ask training participants to consider what information they will collect, how they will collect the information, and how they will use this

information to provide specific feedback to individuals. Health care providers may want to encourage patients or clients to participate in immunization related assessments.

The training on advising patients or clients may include:

- the content of the advice (e.g., benefits and risks associated with immunizations)
- when and where the advice should be given (e.g., at a doctor's office, at a local school)
- who will reinforce the advice given (e.g., a parent, a school nurse).

Training participants should also be encouraged to think about how long the counseling will last as part of the visit (e.g., less than 5 minutes, 10 minutes or 30 minutes) and whether or not they prefer to use a script so that the same advice can be given to all participants.

You may want to have training participants practice or role play giving advice to different types of patients or clients so they get experience tailoring recommendations to individual's needs and readiness to change. For example, if the patient or client has not yet really obtaining a particular immunization for themselves or their children, it may be helpful to provide information on the health risks of not obtaining immunizations. In order to provide tailored advice to individuals, the health care professionals should be trained on the typical progression of immunization - related behavior changes (stages of change) and reminded that some individuals will not change their behaviors (e.g., obtain immunization) the first time they are advised to do so. Likewise, training participants can receive information on how to take into account the person's gender, age, health status, and cultural factors. All of these considerations can help the health care provider to make sure that their message fits the particular needs of their patient or client.

Another approach would be to have health care professionals discuss how they can serve as community role models by providing lectures or information sessions reaching multiple community members at the same time. This may be an effective strategy for community outreach and providing credible recommendations for obtaining immunization. Others have also found that it can be useful to have health practitioners learn about the community factors influencing immunization (e.g., population beliefs about immunization, cost and access to immunization). In some instances it may be useful for practitioners to obtain immunizations to better understand the challenges experienced by patients or clients.

Finally, health care professionals will need to be trained with respect to follow-up with patients or clients (e.g., subsequent visits, phone calls) and what the follow-up should include (e.g., reassessment of behavior, information about how to overcome barriers). Training can include information on how to track patients and clients for follow-up as well. For example, health care professionals can place color-coded stickers in patients' charts as reminders to follow-up at the next visit or to ask one of their staff to make a follow-up call within two weeks after the patient's visit. Training participants can also be given information to refer patients or clients to other programs (e.g., free or low cost immunizations), or refer them to other healthcare team members (e.g., nurse case managers, health educators).

Go to [Tools and Resources for Immunizations Provider Education Interventions](#) to see examples of what others have used.

### ***Identify potential barriers***

Think about the potential barriers that may be encountered along the way and prepare your reaction to these barriers.

From the perspective of health care professionals, there are several challenges to learning more about immunizations and incorporating immunization related counseling into office visits, including:

- short duration of time during visit
- lack of organizational support
- lack of training for physicians, administrators and support staff
- limited availability of educational materials
- lack of information about local community resources (e.g., places, programs, and services related to immunizations)
- perceived lack of patient motivation to change their behavior
- the best content and frequency of information delivery is undetermined
- inconsistent or inadequate frequency of visits
- cultural differences between health care providers and patients or clients
- may be incomplete implementation of the intervention activities due to physician resistance or few incentives to change practices and behaviors.
- hesitation of physicians to deliver advice due to the inability to bill for immunization related services and maintain clinic productivity.
- may be uneconomical to educate health care providers one on one, and could better be done with groups of providers or students during their medical school years.
- physicians may not be willing to change their consultation pattern with patients.
- considerable financial and human resources are required to produce clinical practice guidelines and continuing medical education programs.
- providing immunization related information for medical students in clinical years can be difficult due to the numerous clinical sites in which they receive training.
- collaborative effort is the most important component in encouraging providers to truly commit to improved quality of care.
- time is an issue, with lack of time to provide multiple health related messages in a brief visit, especially in patients with other medical issues to address.
- many physicians work independently (with no one to mandate or reward change) and without computer support for data organization and reminders.
- unique problems associated with the delivery of immunizations to individuals in long-term care facilities
- clinics, provider offices, hospitals and other health care facilities may not be ready or willing to engage in provider education.
- support staff and system is needed to ensure consistent delivery of advice and can be challenging in a health care setting due to time restrictions and staff turnover.
- some providers may not support immunization
- some providers may not be likely to change their own immunization related behaviors.

- may be a history of insufficient record keeping to document incidences of immunization counseling.
- nurses or health educators may not have the same perceived authority as a physician when it comes to providing immunization related education.
- Provider education interventions are often brief (few educational sessions) with little reinforcement over time.
- Some providers may not be clear about HIPAA regulations regarding immunization and therefore may be hesitant in taking part in some immunization related computerized provider systems

From the perspective of the patients or clients receiving the provider education, challenges may include:

- lack of support from family and friends to follow provider's recommendations
- inability to schedule time for doctor's appointments
- lack of transportation to visits
- cost of visit with health care professional
- lack of health insurance
- distrust health care professionals
- language or cultural barriers
- Generalizability of findings from the healthcare setting may be limited to individuals who have health insurance or those who receive regular care.

All of these factors should be considered and discussed as part of the provider education.

### ***Plan your evaluation methods and measures***

- *Pre-test your intervention strategies*

Use focus groups or individual interviews with health care providers to ensure that the different components of the curriculum are appropriate for the intended audience. When testing these components, consider how well the information and activities are understood as intended, whether the information can be applied to different settings, whether the information is perceived as useful and how well the information is recalled or remembered. It can be very difficult to evaluate provider education interventions as they are usually part of a larger project with other intervention strategies. Therefore, changes in behavior, knowledge, attitudes, or other individual factors may be a result of one or a combination of strategies.

- *Consider your evaluation strategy*

In order to determine if your provider reminder and education is working, you will need to evaluate your efforts. It is important to design your evaluation in the planning phase of your intervention because you will need to be able to measure change in order to measure the impact of your intervention. To measure change, you will need to have an idea of what is happening right now.

As with all interventions, it is useful to consider process, impact and outcome evaluation. Process evaluation enables you to assess if your program is being implemented as intended. Provider education may include documentation of

attendance at the training sessions, ability to carry out assignments or activities, recall or memory of what information was provided to the provider, how much time was spent on different training components, and the health care provider's satisfaction with the information exchange. With provider education interventions, it may also be useful to assess the process used to develop and plan the intervention activities. This may include an assessment of the coalition processes (e.g., decision making, conflict management) and well as specific logistics (e.g., time of meeting, location of meeting).

Impact evaluation enables you to determine if you are achieving your intermediate objectives. For provider education, you could evaluate the extent to which the provider changed the types and amount of information provided to their patients, individuals experienced any changes in their visits with the health care provider and their level of satisfaction with the visits, what information they were able to recall, changes in knowledge, changes in attitudes, actions the participant has taken as a result of information provided or changes in behavior. You could also assess whether the training changed policies or practices related to the health care provider or their agency/organization. This can be done by through telephone surveys or alternately, some have met face-to-face with members of the target audience and conducted interviews or focus groups to determine how much of an effect the intervention has had on the target population.

Remember to focus evaluation on the objectives of the intervention. If the objective was to increase knowledge it is important to assess knowledge, if the intent was to decrease negative outcomes then it is important to assess these outcomes. Similarly, it may be useful to assess if the intervention influenced provider readiness to change their behavior related to providing immunization information and resources to their patients. Evaluation may include face-to-face or telephone surveys or qualitative assessments.