Training vaccinators in a time of change

Scott Wittet describes one nongovernmental organization's experience of training with partners in countries

EVERYONE agrees that effective staff training is crucial for quality immunization services. It seems obvious, especially now when many countries are introducing new vaccines, new injection technologies, and new policies. Why is it then that training activities have been neglected, sometimes for many years? Why is training so often given short shrift—insufficient staff allocation, insufficient budget, and insufficient time?

At a recent meeting in Manila of the Alliance's Western Pacific Regional Working Group for Immunization, delegations from three countries approved for support from the Vaccine Fund were asked to say how the RWG could assist them. One of the first requests from all three delegations was: "Give us help with training programmes." As one observer put it: "There is a flood of autodisable syringes and vaccine vials bearing down on these countries—they have to tell their people how to deal with it. The countries are grateful for these needed supplies, and ready to strengthen services, but there is a lot of anxiety as well."

The Gates Children's Vaccine Program at PATH is collaborating on training initiatives with Ministries of Health, NGOs, and other GAVI partners in India, Cambodia, and several other Asian and African countries. This "note from the field" shares recent experiences with the development and implementation of training programmes during this time of change. We hope that lessons we have learned will be useful to colleagues in other parts of the world.

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First, find out what staff know and what they need

Every country situation is different and requires careful strategic planning to meet local needs and to be successful within the local environment. Good planning begins with good information, especially information from those who will be trained. We have found that qualitative rapid assessments of staff needs are a cost-effective way to get a sense of gaps in knowledge and skill. Such methods provide a different type of data than closed-ended questionnaires (the latter can be administered and analysed on a larger scale, for quantitative information, but offer only a choice between existing, set responses, rather than an opportunity to express any original viewpoint). Typically, qualitative data are useful for the design of training and other initiatives aimed at changing behaviour. What is more, such methods are cheaper and generate information much more quickly than a large-scale survey. The rapid assessment reports referenced(1) include sample discussion guides for focus groups and individual interviews, along with details about audience research methods that proved effective in those countries.

Qualitative data also are helpful for designing questionnaires for quantitative surveys, if desired. Such surveys are particularly useful for programme evaluation.

Safety, service quality, and coverage suffer without well-trained staff

When we take the time to listen to service providers, they often complain that they have not received immunization refresher training in many years. (The main exception is the good work done training people to assist with polio campaigns.) Recent rapid assessments of service providers' knowledge and attitudes in India and Nepal reveal a number of common weaknesses that appear to be related to inadequate training and education. For example, several providers report hearing individual accounts of children dying within hours of receiving reconstituted measles vaccine that had been allowed to sit overnight. Whatever the reasons for the reported deaths, the staff assumed that the vaccine had become toxic. As a result, respondents reported, many field workers in the area refused to continue providing measles vaccine without a doctor being present, and measles coverage declined rapidly over the following two years.

The findings revealed two problems: first, that some vaccinators appear to have received no training in the safe use of measles vaccine and the prompt disposal of reconstituted unused vaccine; second, that staff were not supported in the thorough recording and analysis of reported adverse events linked to vaccination. Thus, even though the deaths could have been isolated events that had no causal relationship with the improper delivery of the vaccine, staff became wary of using a safe vaccine and children were left unprotected.

We were further alarmed by the fact that many of the health workers and managers did not regard measles as a killer disease and did not give measles vaccination high priority. This is a failure of training and advocacy within the system, and helps to explain high drop-out rates.

The assessment of health workers'beliefs and knowledge revealed other common concerns too. Asked what they knew about hepatitis B and whether they supported introduction of the vaccine, most health workers were cautiously positive, but emphasized that training should be given high priority.

They also complained that they lack the training, and often the time, to mobilize community groups in support of routine immunization efforts—a strategy which would help boost coverage and save many young lives. ◗

Take the opportunity to meet broader training needs

When we first began discussing training strategies with our Ministry partners in one Asian country, we assumed that the curriculum would focus primarily on new services and procedures. However, our colleagues in that country felt strongly that a more comprehensive approach should be taken, so the team decided that each vaccinator would receive a full two-day refresher training. The course would communicate information on hepatitis B vaccine and auto-disable (AD) syringes. It would also ensure that vaccinators' injection skills were excellent, and that they would be able to conduct more efficient and effective outreach. In addition, the course would ensure that staff were equipped with improved interpersonal communication and social mobilization abilities.

High-quality, effective training takes time to design, implement, and evaluate

Countries have applied for, and received, vaccines from the GAVI partners and the Vaccine Fund at unprecedented speed. This has created immense challenges—and very tight timeframes. Maximizing the effectiveness of training programmes requires a multi-step process, something like that shown in Box 1.

Training often exposes policy gaps and forces decisions

One of the reasons that the design of training programmes takes so long is the fact that the documentation of procedures (i.e. writing the training manual) requires that all relevant policies be in place. Unfortunately, policies are often being developed at the same time as training materials. We have seen many examples of this in the past months: lack of clear procedures for handling and disposal of AD syringes in immunization programmes where staff have always used sterilizable equipment; lack of clarity about whether ADs would be used for all immunizations; confusion about new policies for the use of multi-dose vials; and the need to design record forms which can be reproduced in the training manual. Sometimes, early on, there is confusion about which AD syringe and which disposal box will be provided. This can also delay the creation of instructions for use. Ideally, all procedures, policies, equipment, and forms will be on hand when the training materials are designed, but in our experience that is seldom the case—there are always loose ends. A good trainer will adapt the curriculum as conditions change.

Train staff first, then increase demand for immunization

Most countries are rightly keen to increase demand for their immunization services as a key step towards strengthening the programme. But we feel strongly that staff should first be trained, and new procedures should be running smoothly, before demand on those services is significantly increased through public education and advocacy. There are several reasons:

- First, consumers will ask about changes in the programme and staff must have been trained to effectively deal with those questions and concerns;
- Second, if consumers at the clinic get the feeling that staff are not adequately prepared to use AD syringes or to deliver new vaccines, confidence in the quality of care erodes and will be difficult to rebuild;
- Third, once trained in interpersonal communication and social mobilization, staff can become key agents for creating demand.

Who pays for training?

Staff training is often funded by governments or NGOs themselves, but sometimes supplementary funding is necessary. Countries approved for assistance from the Vaccine Fund for infrastructure strengthening might choose to allocate some of their resources to training. In other situations, Alliance partners in a given country may be willing to pay for some, or all, training costs. What matters is that the immunization partnership in the country recognize the need for the development of human resources as a high priority. Given the political will, countries will find a way to mobilize funds.

NGOs can be highly effective partners

Even though the bulk of immunizations worldwide are provided by governmental agencies, NGOs vaccinate many children each year and contribute other support to immunization too, such as the work described here. Sometimes NGOs are members of national Interagency Coordination Committees. And, since many NGOs have ◗

1: Successful training: some suggested ingredients and timelines

- Understand your various training audiences and their needs–trainees might include vaccinators (including private providers, paediatricians, and hospital staff), their managers, cold chain personnel, and stock managers, among others;
- Develop a comprehensive training strategy for each cadre of trainee, taking into account constraints such as staff availability and training budget;
- Identify and recruit the team needed to carry out the strategy;
- Design and pre-test handouts, job aids, exercises, and visual aids to be used during training courses;
- Organize the courses and make certain that the right staff are invited and attend (this requires the support of all programme and clinic managers–an advocacy initiative in its own right(2));
- Implement strategy and evaluate training impact; and
- Revise future courses based on your experience and evaluation results.

A reasonable timeline for steps one to five is six to nine months, then add the time actually needed for training, depending on the total number of trainees and other factors. Plan to evaluate training impact a month or so after the sessions. In reality, due to a dearth of time, budget, staff, or political will, sometimes the process outlined above is abbreviated, or adapted for the local situation

2: Examples of training initiatives developed by the Gates Children's Vaccine Program at PATH, in close collaboration with Ministries of Health, NGOs, and other GAVI partners:

Andhra Pradesh, India (2000 and 2001)

- Rapid assessment of attitudes towards immunization in service providers and consumers
- Development of curricula for managers and vaccinators
- Training of trainers programme
- Assistance with training 4000+ staff

Cambodia (2001)

- Provision of resource documents for training
- Recruitment of training expert to work with health ministry

Nepal (2000 and 2001)

- Audience research into attitudes towards injections and injection practices in both the private sector and the EPI programme

Regional initiatives:

- Workshops on immunization strengthening, adapted for regional needs, Africa (2001) and Eastern Europe (2001)

already developed strong training programmes for their own health workers, they may offer good models for the government training programme.

Some immunization topics require extra attention

Our audience research findings, and experience since then, have stimulated us to pay special attention to certain topics when designing immunization training programmes:

Hepatitis B issues

- Make sure that audiences get all the information they need on the new vaccine(3).
- Be sure vaccinators understand that hepatitis B vaccine must not freeze, and how they can avoid freezing it.
- Communicate instructions specific to the vaccine used in your country. Hepatitis B vaccine is available as a stand-alone vaccine, in combination with DTP (quadrivalent vaccine), and in combination with DTP and Hib (pentavalent vaccine). Each combination has different advantages: the quadrivalent vaccine does not require reconstitution and therefore requires less time and fewer steps to administer; on the other hand, the pentavalent vaccine delivers an additional antigen.

Measles issues

Train health workers to deal with certain issues specific to measles immunization:

- Proper reconstitution of the vaccine and handling and disposal of reconstituted vaccine.
- Challenges associated with the child's age. Measles vaccine is given later than most childhood vaccines. Older children squirm more during immunization. By this stage, the mother has resumed her normal duties and may not have as much time to bring the child to the clinic. And because older children eat supplementary food, they are at increased risk of diarrhoeal disease. Mothers are less likely to bring a sick child for immunization.
- Make sure policies are clear about how health workers should deal with multi-dose vials. A number of health workers told us that they are not willing to open a twenty-dose vial for just a few children.
- Help staff to promote the value of measles immunization, and to understand the dangers associated with the disease and its complications.

Injection safety issues

- Anticipate confusion related to "unusual" packaging. When provided in bulk, AD syringes are sometimes packaged without an individual plastic wrapper and without a packaging expiry date printed on each unit (the manufacturing date is printed on the box holding the bulk syringes). This is confusing to health workers accustomed to individually packaged disposable syringes—they have been taught that unopened wrappers suggest that the syringe inside is sterile. While the new AD syringes are sterile (they are adequately protected by plastic sheaths over the needle and the plunger), people in the field need to be reassured that this is true.
- Don't underestimate the difficulty of some "mundane" tasks. Experience over the last few months has demonstrated that some of the disposal boxes delivered with AD syringes are a bit tricky to assemble. Anyone can learn to do it, but it requires a little coaching and practice.
- Clearly communicate realistic procedures for handling and disposal of filled safety boxes.

BCG issues

- Finally, BCG immunizations are particularly difficult to administer. Extra time should be allocated to practising intra-dermal injection technique.

The prospect of training thousands of health workers, their managers, and others can be daunting, but improving staff skills and knowledge is one of the best investments we can make. It is especially important to meet this need when we have such a tantalizing goal: making sure that all children have access to the vaccines they need. Training becomes more crucial than ever in the era of GAVI. ■

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References and notes:

1. Bhattarai and Wittet, "Perceptions about Injections and Private Sector Injection Practices in Nepal" (2000) and "Rapid Assessment of Perceptions, Knowledge, and Practices Related to Immunization Injection Safety in Nepal" (2001) are both available on the web at www.childrensvaccine.org/html/safe_injection.htm.
2. A further note about the need for support from managers: you may wish to organize trainings for these staff prior to those for vaccinators. In that way you can deal with questions and concerns ahead of time and get a better response when calling for vaccinator trainees later on.
3. See *Immunization Focus* March 2002, pp 6-7, for more on this topic.