Adverse Event

Mumps virus vaccines (WHO position paper)

Countries planning to use mumps vaccine during mass campaigns should give special attention to planning, including critical review of the mumps vaccine strain selected, provision of guidelines for monitoring, investigation and management of AEFIs (which tend to be more noticeable in a campaign setting), and training of health workers on expected rates of AEFIs, as well as community advocacy and health education.

WER 2001, vol. 76, 45, pp 346-356
page 355

BCG

BCG vaccine (WHO position paper)

To change from general to selective BCG vaccination, an efficient notification system must be in place in addition to the following criteria:
 an average annual notification rate of smear-positive pulmonary TB cases below 5 per 100 000; or
 an average annual notification rate of tuberculous meningitis in children aged under five years below 1 per 10 million population during the previous five years; or
 an average annual risk of tuberculous infection below 0.1%.

WER 2004, vol. 79, 4, pp 27-38
page 38

Contraindications

Yellow fever vaccine (WHO position paper)

Given the very rare, but potentially severe, adverse effects, YF (yellow fever) vaccine for travellers should be administered on strict indications only, particularly in the elderly. Restriction of YF vaccination to authorized centres is likely to promote the appropriate use of YF vaccine.

WER 2003, vol. 78, 40, pp 349-359
page 358

Diphtheria

Diphtheria vaccine (WHO position paper)

The occurrence of diphtheria reflects inadequate coverage of the national childhood immunization programme. Therefore, obstacles to optimal vaccine delivery must be identified and forceful measures taken to improve immunization coverage.

WER 2006, vol. 81, 3, pp 24-32
page 25

Diphtheria vaccine (WHO position paper)

Adequate quantities of diphtheria antitoxin should be available nationally or regionally for medical management of cases.
Diphtheria antitoxin is not recommended for prophylaxis.

WER 2006, vol. 81, 3, pp 24-32
page 25

GACVS

Global Advisory Committee on Vaccine Safety, 34 December 2003

WER 2004, vol. 79, 3, pp 16-20
page 18

GACVS was informed of the (poliomyelitis eradication) programmes decision to stop oral polio vaccine use after certification of eradication in light of the adverse effects associated with its long-term use. It acknowledged that there are four critical elements of work for the period following the global interruption of polio transmission: finalizing the strategy for discontinuing oral polio vaccine after certification; providing country-level guidance on decisions regarding future use of inactivated polio vaccine; ensuring the necessary laboratory capacity for continued surveillance; and mainstreaming (integrating into routine services) the highly experienced and competent polio eradication infrastructure and personnel that have been developed for the programme.

General

Proper handling and reconstitution of vaccines avoids programme errors

V&B update 34
page 3

Vaccinators and store keepers should always:
_Include diluents in stock control and ensure adequate supplies.
_Check that the vaccines have been supplied with the right diluent. If any error is noted, the vaccine should not be used and the supervisor must be notified immeditely.
_Ensure the volume of diluent used is correct so that the proper number of doses per vial is obtained.

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 3

Since hepatitis B vaccines are more expensive than the traditional EPI vaccines, it is important to monitor HepB vaccine wastage and to develop and implement strategies to reduce wastage.
Strategies to reduce wastage include:
_ careful planning of vaccine ordering and distribution;
_ implementation of WHOs multidose vial policy;
_ appropriate use of single-dose and multi-dose vials;
_ careful maintenance of the cold chain;
_ attention to vaccine security; and
_ reducing missed opportunities for immunization.

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 3

HepB vaccine procured through The Vaccine Fund will be supplied with AD syringes and safety boxes. Managers at each level are responsible for ensuring that adequate supplies are available at all times so that each injection is given with a sterile injection device. Attention should also be given to proper use and disposal of safety boxes to collect these materials.

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 4

Issues to consider in choosing a monovalent or combination HepB vaccine for national immunization schedules include:
flexibility in adding the vaccine to the national immunization schedule; impact on cold chain capacity; the number of injections per visit; vaccine security; impact on local vaccine production; and cost.

Use of combination vaccines (e.g. DTP-HepB vaccine) may offer certain programmatic advantages. These include: a decreased number of injections required per visit (and thus decrease the number of needles and syringes required); and a decrease in the amount of space required for cold chain storage and transport.

Introducing Haemophilus influenzae type b (Hib) conjugate vaccine into national immunization services

WHO/V&B/01.29
page 3

Adding Hib conjugate vaccine to the national immunization programme will require:
- an assessment of cold chain storage capacity and cold chain procedures at all administrative levels; and,
- development and implementation of plans to modify cold chain storage capacity and cold chain procedures, if needed.

Introducing Haemophilus influenzae type b (Hib) conjugate vaccine into national immunization services

WHO/V&B/01.29
page 3

Monitoring (Hib vaccine wastage) increases ordering accuracy and reduces wastage by providing reliable data for estimating the number and size of vials to be ordered. It also serves as a tool for improving the practices of health centres when wastage rates are found to be unacceptably high.
Strategies to reduce vaccine wastage include the following:
- careful planning of vaccine ordering and distribution;
- use of both single-dose and multidose vials ;
- careful maintenance of the cold chain;
- implementation of WHOs multidose vial policy, when appropriate.

Introducing Haemophilus influenzae type b (Hib) conjugate vaccine into national immunization services

WHO/V&B/01.29
page 3

Hib conjugate vaccine procured through The Vaccine Fund will be supplied with auto-disable syringes and safety boxes. Additional disposable syringes will be needed for lyophilized vaccines that require reconstitution. Managers at each level are responsible for ensuring that adequate supplies are available at all times. Attention should also be given to the proper use and disposal of the safety boxes used to collect these materials.

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 6

Essential immunization services should be free of charge.

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 12

The UNICEF-WHO Bamako Initiative endorses the cross-subsidization of immunization services, which are free for card-holders, through other user fees in the health sector including drug charges. This cross-subsidization does not pay for the vaccines themselves, but contributes to the cost of running the immunization services. The Bamako Initiative aims to improve service quality through user fees for curative, but not for preventive health services.

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 18

Essential immunization services should be provided at no charge in order to maintain equitable distribution of these essential services, to combat poverty and to meet public health goals that capture the positive externalities of immunization (herd effect).

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 18

Charges for non-essential vaccines may be justified where there would otherwise be no immunization with these vaccines, where disease awareness is high, and where quality of care is good. In other words, if people are highly motivated to pay for the vaccine for their own personal benefit, and if they have the means to pay for it, then enough people may buy the vaccine for themselves and transmission may be stopped. This is unlikely to be the case for any vaccine or other preventive health measure, and other mechanisms for providing non-essential immunization services should be investigated before deciding to implement user fees. If and when user fees are implemented for non-essential immunization, the following ingredients are critical:

There must be a target group that is willing to pay for non-essential immunization services that would not otherwise be offered.

There must be a transparent and efficient means of identifying those who should and should not be charged user fees, a means of subsidizing the costs of those who cannot pay for essential services, and dissemination of this information to potential users.

Fees charged must be revised periodically and fee-setting options reviewed, including cross-subsidies for immunization.

There must be local capacity to implement and manage the fees, to ensure accountability, and to make sure fee collection achieves its purpose: to expand access to quality care.

Effects of the user fees should be monitored.

Some or all of the fees collected must be used within that health facility.

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 20

User fees should not be used for essential immunization services for the following reasons:
User fees impose a financial barrier to immunization for the poor and discourage parents from seeking immunization for their children.
User fees have proven to be an inefficient and ineffective way to recover costs.
The discouraging effect of user fees is higher among the lowest income groups.
User fees work against efforts to expand immunization coverage.
Immunization has positive externalities that increase significantly over a certain coverage threshold (herd effect), and so it is economically justifiable to finance immunization with public funds.
Immunization against diseases of public health importance is highly costeffective and should have a high priority in allocations of public resources.

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 20

Public financing of essential immunization services, accompanied by sound management, is the most equitable funding mechanism.

Reducing measles mortality in emergencies (WHO/UNICEF Joint Statement)

WHO/V&B/04.03
page 2

In emergencies, immunizing children against measles is among the most cost-effective preventive public health measures, particularly for displaced populations housed in camps.

Reducing measles mortality in emergencies (WHO/UNICEF Joint Statement)

WHO/V&B/04.03
page 3

Urgent, structured and coordinated supplementary immunization activities, together with vitamin A supplementation, are the most effective means of reducing measles mortality during and after complex emergencies. UNICEF and WHO will fully support national authorities and other partners to ensure that all children are immunized against measles.

Reducing measles mortality in emergencies (WHO/UNICEF Joint Statement)

WHO/V&B/04.03
page 3

(In complex emergencies) national authorities should develop and implement a measles control plan as rapidly as possible, ensuring high coverage and the maintenance of cold chain/logistics and immunization safety.

Measles vaccines (WHO position paper)

In many countries, large-scale measles (or measles-rubella) SIAs are used to rapidly increase population immunity and bring measles transmission under control. Periodic SIAs may also provide children with a second opportunity for measles immunization as an alternative to routine immunization services. However, the duration of impact of SIAs will be limited unless there is a strong routine immunization programme to prevent the rapid accumulation of susceptible children.

WER 2004, vol. 79, 14, pp 130-142
page 138

Measles vaccines (WHO position paper)

In 2002, the United Nations General Assembly Special Session on Children (World Fit for Children), attended by 191 heads of state, established the goal of a 50% reduction of global measles deaths by the end of 2005 compared with 1999 levels. WHO and the United Nations Childrens Fund have developed a joint strategic plan for measles mortality reduction. The recommended strategy consists of four components: to achieve high (>80%) routine measles vaccination coverage in every district; to provide children with a second opportunity for measles immunization either through the routine immunization services or through periodic supplementary immunization activities; to develop and implement a strong surveillance system; and to improve measles case management. In 2003, the World Health Assembly passed a resolution requesting countries to implement this strategy and to contribute actively and without delay towards achievement of this global goal.

WER 2004, vol. 79, 14, pp 130-142
page 141

Getting started with vaccine vial monitors

Lower rates of vaccine wastage associated with the multi-dose vial policy should encourage the re-establishment of the policy of immunization at every opportunity and more frequent immunization sessions.

WHO/V&B/02.35
page 14

Getting started with vaccine vial monitors

Quantities of vaccine discarded because of a VVM indication of excessive heat exposure should be specifically noted on inventory forms and reported to supervisors, who should review the vaccine wastage statistics and strengthen the cold chain, supervise vaccine administration or change vaccine orders as appropriate.

WHO/V&B/02.35
page 14

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 1: Target diseases

WHO/IVB/04.06
page 14

All member states of WHO agreed in 1988 to eradicate polio, and WHO aims to certify the world as free of the disease by 2005.

There are four core strategies to stop transmission of the wild poliovirus and certify all WHO regions polio-free by the end of 2005 (page 15):
high infant immunization coverage with four doses of oral polio vaccine in the first year of life;
supplementary doses of oral polio vaccine to all children under five years of age during national immunization days (NIDS);
surveillance for wild poliovirus through reporting and laboratory testing of all cases of acute flaccid paralysis (AFP) among children under fifteen years of age;
targeted mop-up campaigns once wild poliovirus transmission is limited to a specific focal area.

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 1: Target diseases

WHO/IVB/04.06
page 20

WHO, UNICEF and UNFPA agreed to set the year 2005 as the target date for worldwide elimination of neonatal tetanus. This implies the reduction of neonatal tetanus incidence to below one case per 1000 live births per year in every district.
Because tetanus survives in the environment, eradication of the disease is not feasible and high levels of immunization have to continue even after the goal has been achieved.
To achieve the elimination goal, countries implement a series of strategies:
Improve the percentage of pregnant women immunized with vaccines containing tetanus toxoid.
Administer vaccines containing tetanus toxoid to all women of childbearing age in high-risk areas. This is usually implemented through a three round campaign approach.
Promote clean delivery and childcare practices.
Improve surveillance and reporting of neonatal tetanus cases.

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 1: Target diseases

WHO/IVB/04.06
page 33

The main strategies to control yellow fever are based on a combination of immunization for protection against the disease and surveillance, and are outlined below.
Prevention:
administering yellow fever vaccine as part of routine infant immunization;*
preventing outbreaks in high-risk areas through mass campaigns;*
control of Aedus aegypti in urban centres.
* Both these strategies should ensure a minimum coverage of at least 80%.
Control
instituting a sensitive and reliable YF surveillance system including laboratory capacity to analyse samples and confirm suspected cases;
emergency response to outbreaks through mass campaigns.

WHO-UNICEF effective vaccine store management initiative: Modules 1 - 4

WHO/IVB/04.16-20
page 2

(O)nly vaccine stocks which are fit for use should be included in stock records. Damaged or expired vaccines should not appear in the available stock balance. If such vaccines do need to be kept until accounting or auditing procedures have been completed, details should be recorded on a separate page or card, pending disposal.

Adopting global vaccine management policies for national use

WHO/V&B/02.32
page 6

Before investing the effort necessary to change a policy, make sure that the policy addresses issues of local importance and is of personal interest to key stakeholders.

Adopting global vaccine management policies for national use

WHO/V&B/02.32
page 4

(When a global policy is issued, the) policy should be distributed to national and subnational staff of immunization services, leading scientists and principal decision-makers. The objective is to raise awareness about the new policy among a broad circle of experts so that they can begin to digest and analyse the policy, discuss it informally, form their opinions and formulate the feedback and the questions that need to be answered.

When seeking input, specify which parts of the policy are open to comment and which are not. Components of the policy determined by evidence from scientific studies should not be modified unless additional evidence from well-designed studies becomes available. If local research becomes available which supports different conclusions it should be offered to the international scientific community for peer discussion. The key role of local scientists and technical experts in the development of national policies is thus to ensure that the scientific content of policies is not changed in ways that compromise efficacy or patient safety.

In order to ensure that science-based portions of (a global) policy are not changed inappropriately, technical experts should review the final drafts of the document.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

The goal of the GLOBAL MEASLES STRATEGIC PLAN is:
_ To halve the annual number of measles deaths by 2005.
_ To achieve and maintain interruption of indigenous measles transmission in large geographical areas with established elimination goals: the Region of the Americas by 2000 (nearly achieved); the European Region by 2007; and the Eastern Mediterranean Region by 2010.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 4

Strategies for achieving sustainable reduction of measles mortality:
Goal: Reduce the number of annual measles deaths by half by 2005.
1. Routine immunization: achieve >90% routine vaccination coverage (in each district and nationally) with at least one dose of measles vaccine administered at 9 months of age or shortly thereafter.
2. Second opportunity for measles vaccination: for all children through routine or supplemental activities.
3. Measles surveillance: establish effective surveillance for measles to report regularly the number, age and vaccination status of children contracting or dying from measles, to conduct outbreak investigations and to monitor immunization coverage.
4. Improve management of complicated cases: including vitamin A supplementation and adequate treatment of complications.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 4

Strategies for achieving and maintaining interruption of indigenous measles transmission
Goal: Achieve and maintain interruption of indigenous measles transmission in large geographical areas.
1. Routine immunization: achieve very high (i.e. > 95%) immunization coverage (in each district and nationally) with the first dose of measles vaccine administered through routine services.
2. Second opportunity for measles vaccination: to maintain the number of susceptible population below the critical threshold for herd immunity.
3. Measles surveillance: investigation and laboratory testing of all suspected measles cases (case-based surveillance). Isolation of measles virus should be attempted from all chains of transmission.
4. Improve management of complicated cases: including vitamin A supplementation and adequate treatment of complications.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

If conducted, supplemental campaigns should target large populations (entire nations or large regions) and achieve coverage of over 90 per cent with safe and high quality service.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

Measles immunization provides an opportunity to reach children with other measures that improve overall child health, including:
_ supplemental vitamin A doses;
_ rubella immunization and surveillance activities.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 4

Countries are encouraged to:
_ Assess progress on measles control. They should also review their measles epidemiology.
_ Identify the reasons for low routine coverage.
_ Take advantage of the priority given to measles to improve immunization safety. The safety of immunization is based on ensuring that the following elements are addressed: behavioural change, the provision of safe injection equipment (e.g., auto-disable syringes and safety boxes) and the adequate management and disposal of immunization waste.
_ Plan and integrate measles activities with other health initiatives.
_ Use advocacy for measles mortality reduction to promote the further development of routine immunization services.
_ Develop a 3- to 5-year plan for measles mortality reduction. Countries should develop plans together with the national inter-agency coordinating committees. Measles plans should be part of a comprehensive plan for strengthening immunization services.

WHO-UNICEF guidelines for developing a comprehensive multi-year plan (cMYP)

WHO/IVB/05.20
page 3

The decision to develop a cMYP should be made by each country, taking into account the timing of existing national planning instruments (e.g. health sector plans, annual budgets and medium-term expenditure frameworks). Ideally the timing should be fully synchronized with the health sector planning process. If not fully synchronized, a new cMYP should be prepared a year before the expiry of the current multi-year plan, and should not extend beyond the limit of the health sector plan.

(T)he objectives, strategies, cost and financing information from the cMYP should be integrated within the national health plan and budget.

BCG vaccine (WHO position paper)

WER 2004, vol. 79, 4, pp 27-38
page 38

To change from general to selective BCG vaccination, an efficient notification system must be in place in addition to the following criteria:
an average annual notification rate of smear-positive pulmonary TB cases below 5 per 100 000; or
an average annual notification rate of tuberculous meningitis in children aged under five years below 1 per 10 million population during the previous five years; or
an average annual risk of tuberculous infection below 0.1%.

Influenza vaccines (WHO position paper)

WER 2005, vol. 80, 36, pp 279-287
page 280

WHO encourages initiatives to raise awareness of influenza and influenza vaccination among healthcare workers and the public, including definition of national targets for immunization programmes.

WHO strongly emphasizes the importance of raising the public consciousness of influenza and its complications as well as of the beneficial effects of influenza vaccination. (page 287)

Measles vaccines (WHO position paper)

WER 2004, vol. 79, 14, pp 130-142
page 132

Although global measles eradication may be technically feasible, a step-wise elimination strategy, such as that implemented by many industrialized countries and now also adopted by 4 of 6 WHO regions, may be more realistic. The strategy of strengthening routine immunization services, combined with periodic SIAs, has proved costeffective in developed as well as in less-developed countries. However, the initial focus should be on reducing measles morbidity and mortality in countries where the burden of the disease is highest.

Introduction of inactivated poliovirus vaccine into oral poliovirus vaccine-using countries (WHO position paper)

WER 2003, vol. 78, 28, pp 241-250
page 241

Vaccination against polio will need to continue (at least until poliovirus transmission has been interrupted globally) because of the threat of wild poliovirus importation. However, an increasing number of polio-free countries are determining that the risk of paralytic poliomyelitis associated with continued routine immunization using oral poliovirus vaccine (OPV) is greater than the risk of importation or laboratory handling of wild poliovirus. Some of these countries have introduced inactivated poliovirus vaccine (IPV) a safe and effective alternative for routine immunization using one of two approaches: replacement of OPV by IPV and introduction of a sequential IPV/OPV schedule (in which 13 doses of IPV would be followed by 23 doses of OPV.) Tropical developing countries pose a special challenge for policy formulation on IPV. In these countries, given the unresolved issues related to the immunogenicity of IPV when administered in the WHO/Expanded Programme on Immunization (EPI) vaccination schedule, the continued focal circulation of wild poliovirus on two continents, the relatively high cost of IPV and the operational complexities of introducing this vaccine, WHO does not as of July 2003 recommend the adoption of IPV alone or in a sequential schedule. It is expected that this position will be reviewed late 2004 and, if appropriate, revised according to the additional information that has become available on IPV effectiveness, logistic implications, and on further progress towards polio eradication. WHO is encouraging operational studies and introduction projects to evaluate these issues.

Introduction of inactivated poliovirus vaccine into oral poliovirus vaccine-using countries (WHO position paper)

WER 2003, vol. 78, 28, pp 241-250
page 242

In 1988 a global eradication target (was set) by the World Health Assembly (to be accomplished by 2000). The polio eradication initiative developed the following four strategies: (i) achieving and maintaining high routine infant vaccination coverage with OPV; (ii) establishing surveillance for poliomyelitis and poliovirus through acute flaccid paralysis (AFP) notifications and laboratory investigation; (iii) conducting mass OPV campaigns (i.e. national immunization days or NIDs) to eliminate widespread circulation of wild poliovirus; and (iv) carrying out house-to-house OPV mop-up campaigns to interrupt any remaining chains of transmission.

Rubella vaccines (WHO position paper)

The primary purpose of rubella vaccination is to prevent the occurrence of congenital rubella infection including CRS.

WER 2000, vol. 75, 20, pp 161-169
page 162

Rubella vaccines (WHO position paper)

For countries wishing to prevent the occurrence of congenital rubella infection including CRS, 2 approaches are recommended: (a) prevention of CRS only, through immunization of adolescent girls and/or women of childbearing age; or (b) elimination of rubella as well as CRS through universal vaccination of infants, surveillance and assuring immunity in women of childbearing age. Decisions on which approach is taken should be based on the level of susceptibility in women of childbearing age, the burden of disease due to CRS, strength of the basic immunization programme as indicated by routine measles coverage, infrastructure and resources for child and adult immunization programmes, assurance of injection safety, and other disease priorities.

WER 2000, vol. 75, 20, pp 161-169
page 168

Rubella vaccines (WHO position paper)

Countries wishing to prevent CRS should immunize adolescent girls and/or women of childbearing age. The precise target population addressed will depend on susceptibility profile, cultural acceptability and operational feasibility. The most rapid impact would be achieved by mass campaigns for women of childbearing age (and men preferably). For increased impact even men should be vaccinated. Vaccination through routine services could ultimately achieve the same protection, but after a delay during which CRS cases will still occur.

WER 2000, vol. 75, 20, pp 161-169
page 169

Yellow fever vaccine (WHO position paper)

In countries at risk for YF (yellow fever), the use of the 17D vaccine is the main strategy recommended to rapidly build up YF immunity in the population at large. This prevention strategy has two components. The first component is the inclusion of the 17D vaccine in national childhood immunization programmes.

The second component is the implementation of mass preventive vaccination campaigns to protect susceptible older age groups. In the event of limited resources, assessment of the degree of risk can help prioritize areas for mass preventive campaigns.

WER 2003, vol. 78, 40, pp 349-359
page 350

Yellow fever vaccine (WHO position paper)

YF (yellow fever) vaccine should be offered to all travellers to and from at-risk areas, unless they belong to the group of individuals for whom YF vaccination is contraindicated. There is currently insufficient scientific evidence to support a change in the International health regulations for travelers to endemic areas demanding proof of valid YF vaccination within the preceding ten years. However, in at-risk countries, vaccination resources should be directed to ensuring good primary vaccination coverage rather than to providing booster doses.

WER 2003, vol. 78, 40, pp 349-359
page 350

Yellow fever vaccine (WHO position paper)

Given the very rare, but potentially severe, adverse effects, YF (yellow fever) vaccine for travellers should be administered on strict indications only, particularly in the elderly. Restriction of YF vaccination to authorized centres is likely to promote the appropriate use of YF vaccine.

WER 2003, vol. 78, 40, pp 349-359
page 358

Yellow fever vaccine (WHO position paper)

To avoid devastating outbreaks of YF (yellow fever) in the future, YF vaccine must be fully introduced into well functioning childhood vaccination programmes. In addition, childhood vaccination should be combined with pre-emptive YF vaccination campaigns in atrisk areas, and in urban areas control efforts directed against Ae. aegypti should be increased. In areas of predominantly jungle-type transmission, YF vaccination of persons belonging to the high-risk groups is strongly recommended.

WER 2003, vol. 78, 40, pp 349-359
page 358

Diphtheria vaccine (WHO position paper)

The occurrence of diphtheria reflects inadequate coverage of the national childhood immunization programme. Therefore, obstacles to optimal vaccine delivery must be identified and forceful measures taken to improve immunization coverage.

WER 2006, vol. 81, 3, pp 24-32
page 25

Diphtheria vaccine (WHO position paper)

Adequate quantities of diphtheria antitoxin should be available nationally or regionally for medical management of cases.
Diphtheria antitoxin is not recommended for prophylaxis.

WER 2006, vol. 81, 3, pp 24-32
page 25

WHO recommended standards for surveillance of selected vaccine-preventable diseases

Hepatitis B is targeted by WHO for reduced incidence/prevalence.

WHO/V&B/03.01
page 1

Global Advisory Committee on Vaccine Safety, 34 December 2003

GACVS was informed of the (poliomyelitis eradication) programmes decision to stop oral polio vaccine use after certification of eradication in light of the adverse effects associated with its long-term use. It acknowledged that there are four critical elements of work for the period following the global interruption of polio transmission: finalizing the strategy for discontinuing oral polio vaccine after certification; providing country-level guidance on decisions regarding future use of inactivated polio vaccine; ensuring the necessary laboratory capacity for continued surveillance; and mainstreaming (integrating into routine services) the highly experienced and competent polio eradication infrastructure and personnel that have been developed for the programme.

WER 2004, vol. 79, 3, pp 16-20
page 18

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 9-11 November 2005

WER 2006, vol. 81, 1, pp 2-11
page 3

(SAGE) identified the need for appropriate immunization strategies in areas where infection with the human immunodeficiency virus (HIV) among children, adolescents or adults is high.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 9-11 November 2005

WER 2006, vol. 81, 1, pp 2-11
page 3

(SAGE) recommended the extension of the reaching every district (RED) strategy to displaced minority groups, the homeless, refugees and victims of natural and man-made disasters.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 9-11 November 2005

WER 2006, vol. 81, 1, pp 2-11
page 3

(SAGE) expressed concern about the possible negative impact on immunization services in areas where attempts are being made to integrate vertical services into one stop shops.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 9-11 November 2005

WER 2006, vol. 81, 1, pp 2-11
page 3

As previously recommended, (SAGE) strongly urges all countries to ensure that health and finance ministries have budget lines for vaccine purchase. Furthermore, each country should prepare financial sustainability documents to justify these budget lines. SAGE was concerned that there was not consistency in priority setting across regions, nor clarity in the criteria that were influencing regional priorities.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 9-11 November 2005

WER 2006, vol. 81, 1, pp 2-11
page 4

(SAGE) noted that any switch to inactivated poliovirus vaccine brings potential new challenges with diphtheriatetanuspertussis and combination vaccines; and strongly supported immunization activities in countries currently or recently endemic for polio. These could be through high-coverage routine service, good supplementary immunization activities, or a combination of both, stressing that by whatever means all children need to be protected from polio.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 9-11 November 2005

WER 2006, vol. 81, 1, pp 2-11
page 4

(SAGE) noted that a key component that was still lacking was the operationalizing of GIVS (Global Immunization Vision and Strategy) in terms of country and regional plans and activities. Using the newly proposed multi-year planning process, it was anticipated that countries would use the GIVS checklist to identify areas that may have been forgotten.

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 3

Adding HepB vaccine to the national immunization schedule will require cold chain assessments at all administrative levels:
_ to assure adequate storage capacity is available, and
_ to assure policies and procedures are in place to prevent freezing of HepB vaccine.

Vaccine introduction guidelines. Adding a vaccine to a national immunization programme: decision and implementation

WHO/IVB/05.18
page 34

In countries with a dispersed population and extensive outreach, a higher wastage rate may be acceptable not to lose programme efficiency. Therefore, the appropriate goal is wastage optimization, which means to minimize preventable wastage without compromising coverage or safety.

Vaccine introduction guidelines. Adding a vaccine to a national immunization programme: decision and implementation

WHO/IVB/05.18
page 35

Where possible, wastage should be categorized into opened and unopened vial wastage, analysed by each administrative level, and compared with coverage data.

Vaccine introduction guidelines. Adding a vaccine to a national immunization programme: decision and implementation

WHO/IVB/05.18
page 40

A key aspect of getting disease data is to compare it with coverage data to ensure that the impact on disease is in line with what is expected for the level of coverage in that area. Obtaining the immunization status of all disease cases, and comparing immunization coverage of cases with immunization coverage in the overall population provides a method of estimating vaccine effectiveness that is also useful for programme monitoring. However, there are important biases in the method, so the estimates need to be carefully interpreted.

Ensuring the quality of vaccines at country level: Guidelines for health staff

WHO/V&B/02.16
page 17

Remember, only vaccine stocks that are fit for use should be included in stock records. Any expired vials, heat-damaged vials or vials with VVMs beyond the discard point should not appear in the available stock balance. If such vaccines have to be retained for some time, e.g. until accounting or auditing procedures have been completed, they should be recorded on a separate page or card until disposal takes place.

Guidelines for the international procurement of vaccines and sera

WHO/VSQ/98.05
page 11

Vaccination demand (forecasting): This should:
be established preferably on a five-year plan by vaccine;
take into account calculated discard rates, based on an accurate reporting system;
integrate not only routine but also special needs like NIDs or specific campaign(s).

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 9-11 November 2005

WER 2006, vol. 81, 1, pp 2-11
page 5

SAGE suggested that the GIVS research agenda be expanded beyond clinical trials to include other areas of research, such as health systems research, acceptability and community preparedness studies, epidemiological studies and cost-effectiveness studies.

SAGE praised the overall GIVS costing model and encouraged its further refinement and completion by WHO. Specifically, it was noted that the costing of surveillance and monitoring and for advocacy and communication may have been underestimated.

Mumps virus vaccines (WHO position paper)

WER 2001, vol. 76, 45, pp 346-356
page 354

Countries considering inclusion of mumps vaccination into their national immunization programme should set disease-control targets (elimination or control) and design their immunization strategies accordingly.

Mumps virus vaccines (WHO position paper)

WER 2001, vol. 76, 45, pp 346-356
page 355

Strategies to achieve mumps elimination may include: (1) high (>90%) coverage with a first dose of vaccine containing mumps at the age of 12-18 months; (2) ensuring a second opportunity for vaccination; and (3) conducting a catch-up immunization of susceptible cohorts.

Mumps virus vaccines (WHO position paper)

WER 2001, vol. 76, 45, pp 346-356
page 355

Countries planning to use mumps vaccine during mass campaigns should give special attention to planning, including critical review of the mumps vaccine strain selected, provision of guidelines for monitoring, investigation and management of AEFIs (which tend to be more noticeable in a campaign setting), and training of health workers on expected rates of AEFIs, as well as community advocacy and health education.

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 2: The vaccines

WHO/IVB/04.06
page 6

All children should have a second opportunity to receive measles vaccine. This increases the proportion of children who receive at least one dose and helps to assure measles immunity in previously vaccinated children who failed to develop such immunity. This opportunity may be delivered either through routine immunization services or through periodic mass campaigns.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 212

(Regarding WHO African Region) SAGE noted the need to encourage increased demand for vaccines by the public.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 212

The many new initiatives launched at the global level present both opportunities and challenges. While they bring additional resources, enhanced focus and opportunities for increased partner collaboration, they also bring the challenges of avoiding competition between initiatives and duplication. SAGE highlighted the need for all partners to align resources, technology and strategies in support of national programmes.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 214

SAGE requested that the WHO position paper on mumps vaccines be revised, drawing on the conclusions and recommendations from the recent consultation on use of mumps vaccine in the Eastern Mediterranean Region. The revision should take into consideration the accumulating global experience that high coverage with 2 doses of measlesmumpsrubella vaccine (MMR) is required to effectively prevent mumps outbreaks.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 216

SAGE requested the updating of the WHO position paper on JE immunization.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 217

There was agreement from SAGE members that WHO should broaden the goals of tetanus vaccination programmes from elimination of maternal and neonatal tetanus (MNT) to protection of all ages and sexes throughout life.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 218

SAGE encouraged all countries to consider their preparedness for a potential influenza pandemic, recognizing that it would occur before strain-specific vaccine can be made in significant quantities.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 219

SAGE considered that the GIVS goal of 90% (measles) mortality reduction by 2010 remained appropriate. SAGE recommended that work be undertaken to prepare for discussions on the feasibility of a global elimination goal.

Tetanus vaccine (WHO position paper)

The goals of tetanus control are primarily (i) to eliminate MNT globally (<1 case per 1000 live births at the district level); and (ii) to achieve and sustain high coverage of 3 doses of DTP and of appropriate booster doses in order to prevent tetanus in all age groups.

WER 2006, vol. 81, 20, pp 198-208
page 199

Tetanus vaccine (WHO position paper)

All (tetanus vaccine) doses received over an individuals lifetime should be recorded on their lifelong vaccination card.

WER 2006, vol. 81, 20, pp 198-208
page 206

State of the art of new vaccines: research and development

Of importance for the supply of rabies vaccine is the use of the intradermal route schedule which reduces the number of vaccine vials and thereby the cost of PEP by up to 80% (US$ 5-10 for vaccine alone).

WHO/IVB/06.01
page 89

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

The objectives of the four-part strategy (for sustainable measles mortality reduction that was endorsed by the World Health Assembly in 2003) are to:
1. provide every child with a dose of measles vaccine by 12 months of age;
2. give all children from nine months to 15 years of age a second opportunity for measles immunization;
3. establish effective surveillance; and
4. improve clinical management of complicated cases, including vitamin A supplementation.

WHO/IVB/05.11
page 2

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

(T)he global goal now is to reduce annual global measles deaths by 90% by 2010 from 2000 estimates.
In 2000, the UN Millennium Summit set a goal to reduce the under-five mortality rate by two-thirds, between 1990 and 2015.

WHO/IVB/05.11
page 3

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

In conflict or emergency areas, WHO and UNICEF have a commitment to ensure that, at a minimum, measles vaccine and vitamin A supplements are administered. (WHO/UNICEF joint
statement: reducing measles mortality in emergencies, 2002.)

WHO/IVB/05.11
page 3

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

The primary responsibility for reducing measles deaths lies with national governments.

WHO/IVB/05.11
page 3

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

It is important that measles activities be fully integrated into multi-year immunization plans.

To maximize the impact of the strategy and ensure continuity in sustainable measles mortality reduction activities, measles activities must be included in national immunization financial sustainability plans.

The majority of resources for measles mortality reduction activities need to be mobilized from national governments and their local partners. International partners can help to fill financing gaps, but should not be considered as a primary source for long-term funding.

Conclusions and recommendations from the meeting of the immunization Strategic Advisory Group of Experts (SAGE) - November 2006

WER 2006, vol. 82, 1, pp 1-16
page 7

One non-traditional approach to immunization financing is Advanced Market Commitments (AMCs.) The essence of the AMC mechanism is an agreement made by donors to guarantee a pre-set fixed price for a fixed market size (number of doses) that will be paid for a vaccine that meets a specific pre-established "target product profile"; this guarantee is made with the understanding that the recipient (developing) countries agree to make co-payments to purchase the vaccine.

Once the commitment is exhausted, manufacturers, having benefited from the subsidy, are contractually obliged either to continue to sell to developing countries at a price that the countries can accommodate over the long term or to license their technology to other manufacturers.

Three major roles were identified for WHO: (i) to provide recommendations on target product profiles through SAGE; (ii) to conduct the prequalification process for AMC-eligible products to be purchased through United Nations agencies; and (iii) to provide technical advice on evidence-based decision-making, priority setting, the introduction of new vaccines, and health-system financing to governments of AMC-eligible countries. SAGE recommends that WHO assumes these functions.

During discussion, it was recommended that the target product profile include elements aimed at reducing systems costs (especially related to the cold chain), such as specifying the presentation and vial size.

SAGE endorsed the role that is proposed for it - that is, to review WHOs proposals for the target product profile and to make a recommendation on the most appropriate profile.

SAGE recommends that the GAVI Alliances secretariat, the World Bank and the AMC independent advisory committee further refine and clarify the AMCs operating mechanisms so that potential obstacles to effective implementation are addressed.

SAGE recommends that more in-depth investigation should be done of the investments in immunization systems required to support the introduction of pneumococcal vaccine in AMC-eligible countries (which are also GAVI-eligible countries). SAGE also recommends that the impact of different copayment scenarios on the immunization financing profiles of AMC-eligible countries should be further modelled and investigated using more accurate estimates of future demands from countries.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 0

In conjunction with GIVS (Global Immunization Vision and Strategy), and as a way of implementing GIVS at national level, countries are encouraged to develop their own comprehensive Multi-Year Plans (cMYP) for immunization.

In conjunction with GIVS, countries are encouraged to develop a cMYP for immunization (page 1).

WHO-UNICEF guidelines for developing a comprehensive multi-year plan (cMYP)

WHO/IVB/05.20
page 6

(T)here are real benefits to combining immunization with three other interventions, namely vitamin A (VitA) supplementation, the distribution of insecticide-treated bednets for malaria prevention, and anthelminths.

The cost of integrating the national immunization programme (NIP) service delivery with other health programmes may be incremental to the NIP budget, as some costs might be included in other programme budgets. However, incremental costs such as transport of bednets may need to be included within the immunization budget if not covered elsewhere.

WHO-UNICEF guidelines for developing a comprehensive multi-year plan (cMYP)

WHO/IVB/05.20
page 7

It is recommended that the planning and costing process be a team-building exercise for the national immunization programme. The starting point is a meeting of participants from all sections of the immunization system,

ICC (interagency coordinating committee) members, development partners, and other immunization stakeholders need to be involved in the development of the cMYP.

Engaging with the Ministry of Finance and Ministry of Planning early in this process will be important, since the cMYP includes an assessment of future programme financing, including government resources.

WHO-UNICEF guidelines for developing a comprehensive multi-year plan (cMYP)

WHO/IVB/05.20
page 7

Separate plans made previously for polio, measles, cold chain and MNT need to be fully incorporated into the cMYP.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 1

(P)lanning needs to reflect country priorities, to be aligned with country planning cycles, and to simplify and harmonize procedures.

In summary, the WHO-UNICEF Guidelines for Developing a Comprehensive Multi-Year Plan for Immunization provides a new approach to planning that:
- ensures that the strategies in the plan are sufficiently comprehensive;
- integrates and consolidates activities with other health interventions and within the immunization programme to solve shared problems;
- plans by immunization system components rather than by disease or initiative;
- evaluates the costs and financing of the cMYP to ensure the improved financial management sustainability of the programme;
- links annual work plans to the multi-year plan;
- links to the broader health sector planning and budgeting processes.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 2

It is broadly recognized that strategic planning for immunization requires credible information about cost to achieve the programme objectives, estimate available funding, allocate funds within the programme, and avoid funding shortfalls. For this reason, analysing the costing and financing of a cMYP is a key step in the planning process.

The WHO-UNICEF Guidelines for Developing a Comprehensive Multi-Year Plan for Immunization provides a series of steps to developing a comprehensive plan. . . . Note that the basis of the costing should be the programmatic objectives and milestones.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 5

Although the different planning processes and objectives are not necessarily in competition, reconciling all these in the context of a strategic plan for immunization is not an easy task, and it is therefore important that objectives and priorities are aligned. Similarly, the costing information generated through the cMYP development should link to the relevant consolidated costing and budgeting plan for the health sector. If applicable, it can be useful to link various ongoing exercises such as: poverty reduction strategy papers (PRSP); health sector and public expenditure reviews; budgeting, allocation, and expenditure (MTEF, NHA); and external support and resource mobilization processes (such as donor round tables, SWAp, etc.). This has the effect of increasing the visibility of immunization during health sector planning processes and can increase the chances of mobilizing the resources needed for the programme.

(T)he period covered by resource estimation should be set for five years, as with a longer timeframe, more assumptions need to be made for future projections, and estimates become unreliable. Minimum five-year projections therefore seem useful, especially when linked to annual operational plans and allocations.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 9

Although defining programme objectives and strategies during the development of a cMYP should be based on cost-effectiveness considerations (particularly in relation to new vaccine introduction), the Tool (cMYP Costing and Financing Tool), in its current design, is ill equipped to strengthen such a priority-setting exercise. Likewise, the Tool is not designed to determine allocative efficiency, when a critical consideration in any planning and budgeting exercise must be the efficient use of funds.

(I)n its current format, the Tool does not automatically factor in any scale effect. Ideally, costs would vary as the scale of immunization interventions changed. . . . any scale effect needs to be done manually.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

Before starting the cMYP costing and financing exercise, several principles should be noted.

The first is the importance of creation of leadership and ownership of the cMYP development process within the immunization department of your MoH.

It is equally important to inspire commitment and buy-in to the process, priorities, and strategies for immunization, from the stakeholders represented on the inter-agency coordinating committee (ICC).

Because any costing and financing resource requirement projection exercise will invariably be based on many assumptions, limited data and future uncertainties mean that these assumptions need to be fixed upon in close cooperation and agreement with all stakeholders so that the final estimations for the cMYP will be credible, acceptable, and useful.

Unfortunately, there is no blueprint for the process, and therefore considerable time can be taken up tailoring the cMYP costing and financing exercise to each individual country. The exercise cannot be done in isolation and will need the collaboration of colleagues in the MoH and the MoF, as well as all development partners supporting immunization, for data collection, analysis feedback, and review.

The second principle is the importance of putting together a good team to work on the cMYP costing and financing exercise. It will need to be composed of the right people, with the right skills, and it will need the right amount of time to complete the exercise. A focused and manageable group is needed of no more than three people. It will also be important to decide on who will lead and who will coordinate the team.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

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page 15

The costing exercise needs to account for all the inputs and activities designed to carry out the strategies needed to reach the programme objectives, as defined in the cMYP.

At minimum, it is important to estimate the costs, financing and future resource requirements of each cMYP for all immunization-specific inputs and activities. All inputs and activities that are shared with the immunization programme, such as personnel, transportation and buildings, are optional.

Given the relative difficulty in collecting information on shared costs in a programme and the fact that these costs are not tied to funding that is specifically set aside for immunization (the most relevant for the cMYP costing and financing exercise), the estimation of shared costs is optional.

However, we strongly recommend that these shared costs are taken into account, since in most countries shared inputs are likely to be quite significant. The added investment in time will result in a more accurate costing exercise. By excluding the shared inputs, the analysis will: (a) underestimate the true government contribution to immunization since many of the shared inputs tend to be funded from national resources (especially for personnel costs); (b) underestimate the total cost/resource requirements of the programme if other inputs (such as vehicles) are frequently shared with other programmes.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 15

(T)he main method used is to allocate shared inputs to a programme based on the percentage time spent on immunization.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 15

Estimations of costs, financing and future resource requirements should be made for a particular set of years or time period.
One past year. The rationale for looking at a past year is to have a baseline reference year from which comparisons can be made between how much the programme currently costs, and what will be the future resources required.
Between 3 and 5 future years. This is considered the standard period for making future projections of costs and resource requirements in a comprehensive multi-year plan (cMYP), especially if this is linked to annual operational plans.
Optional forecast (beyond 5 years). In some instances, it may be useful to forecast the costs and resource requirements for the programme beyond the 35 year planning cycle of the cMYP.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 20

Because the final costs/resource requirement estimates are reported in US dollars, a standard inflation rate of 2% is recommended.
Note that this is a default (2%) US dollar inflation rate and not a local currency inflation rate. (page 27)

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 32

The current convention is to make projections of vaccine requirements based on births.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 34

Because the future price evolution of vaccines is uncertain, the methodology used in the Tool (cMYP costing and financing tool) recommends making projections based on constant prices. In other words, to forecast the future needs of vaccines based on the last available year of vaccine price available, and to use the same prices for the entire projection period (up to five years.)

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 39

It is important to note the WHO-UNICEF recommendations for the forecasting of vaccines that have more than a one dose schedule, and that these should be based on the first dose coverage target of these vaccines.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 40

(I)f it is difficult to measure the proportion of vehicles or buildings costs that are allocated to immunization, you can simply use staff time devoted to the programme as a way of allocating the value of shared vehicles and buildings costs, and this will give a good approximation.

Collecting data on the percentage time spent on immunization is time-consuming, but this information will more accurately reflect the amount of government input to the programme, and so reporting shared personnel costs is invaluable.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 77

(I)t is difficult to make accurate predictions about future financing trends, particularly as governments and external partners are often unable to make long-term commitments for funding. It will be necessary to make the most reliable projections possible through: (1) diagnosis of the macroeconomic and health sector environment in which the immunization programme operates; (2) discussions with focal points at the MoH Finance Department, the MoF, and ICC partners.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 90

(I)t is widely considered that focusing too strongly on campaigns at the expense of routine delivery systems is not sustainable in the long term. It is important to ensure that campaigns complement routine activities, rather than the reverse.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 95

The cMYP costing and financing exercise should not be regarded as a one-off exercise, but needs to be updated in conjunction with the annual planning exercise, or as programme objectives and goals change, or are adjusted.

The Tool (cMYP Costing and Financing Tool) is designed to make annual updates relatively straightforward, and we strongly encourage that you do this.

The WHO-UNICEF Guidelines for Developing a Comprehensive Multi-Year Plan (cMYP) for Immunization recommend that for every year of the cMYP period, an annual workplan be prepared for the forthcoming year, and that this should include relevant costing and financing elements. Strong annual and multi-year planning, in conjunction with a budgeting process, is absolutely essential to plan for, monitor and manage the immunization programme, and to ensure that enough money is available to support planned inputs and activities aimed at reaching objectives and targets.

Pneumococcal conjugate vaccine for childhood immunization (WHO position paper)

WER 2006, vol. 82, 10, pp 93-104
page 97

Although infection with pneumococci accounts for a substantial proportion of the estimated 2 million deaths from pneumonia occurring in children, the use of pneumococcal vaccine should be seen as complementary to the use of other pneumonia-control measures, including appropriate case management and the reduction of exposure to known risk factors, such as indoor pollutants, tobacco smoke, premature weaning and nutritional deficiencies.

Getting started with vaccine vial monitors

WHO/V&B/02.35
page 13

With use of VVMs and the implementation of the multi-dose vial policy, (t)he wastage factor should be checked and adjusted by measuring vaccine wastage changes, particularly in areas where:
- wastage is already high;
- the cold chain is weak;
- vaccine is beginning to be taken out of the cold chain.

HIV/AIDS and immunosuppression

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 9-11 November 2005

WER 2006, vol. 81, 1, pp 2-11
page 3

(SAGE) identified the need for appropriate immunization strategies in areas where infection with the human immunodeficiency virus (HIV) among children, adolescents or adults is high.

Hepatitis B

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 3

Since hepatitis B vaccines are more expensive than the traditional EPI vaccines, it is important to monitor HepB vaccine wastage and to develop and implement strategies to reduce wastage.
Strategies to reduce wastage include:
_ careful planning of vaccine ordering and distribution;
_ implementation of WHOs multidose vial policy;
_ appropriate use of single-dose and multi-dose vials;
_ careful maintenance of the cold chain;
_ attention to vaccine security; and
_ reducing missed opportunities for immunization.

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 3

HepB vaccine procured through The Vaccine Fund will be supplied with AD syringes and safety boxes. Managers at each level are responsible for ensuring that adequate supplies are available at all times so that each injection is given with a sterile injection device. Attention should also be given to proper use and disposal of safety boxes to collect these materials.

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 4

Issues to consider in choosing a monovalent or combination HepB vaccine for national immunization schedules include:
flexibility in adding the vaccine to the national immunization schedule; impact on cold chain capacity; the number of injections per visit; vaccine security; impact on local vaccine production; and cost.

Use of combination vaccines (e.g. DTP-HepB vaccine) may offer certain programmatic advantages. These include: a decreased number of injections required per visit (and thus decrease the number of needles and syringes required); and a decrease in the amount of space required for cold chain storage and transport.

WHO recommended standards for surveillance of selected vaccine-preventable diseases

WHO/V&B/03.01
page 1

Hepatitis B is targeted by WHO for reduced incidence/prevalence.

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 3

Adding HepB vaccine to the national immunization schedule will require cold chain assessments at all administrative levels:
_ to assure adequate storage capacity is available, and
_ to assure policies and procedures are in place to prevent freezing of HepB vaccine.

Hib

Introducing Haemophilus influenzae type b (Hib) conjugate vaccine into national immunization services

WHO/V&B/01.29
page 3

Adding Hib conjugate vaccine to the national immunization programme will require:
an assessment of cold chain storage capacity and cold chain procedures at all administrative levels; and,
development and implementation of plans to modify cold chain storage capacity and cold chain procedures, if needed.

Introducing Haemophilus influenzae type b (Hib) conjugate vaccine into national immunization services

WHO/V&B/01.29
page 3

Monitoring (Hib vaccine wastage) increases ordering accuracy and reduces wastage by providing reliable data for estimating the number and size of vials to be ordered. It also serves as a tool for improving the practices of health centres when wastage rates are found to be unacceptably high.
Strategies to reduce vaccine wastage include the following:
careful planning of vaccine ordering and distribution;
use of both single-dose and multidose vials ;
careful maintenance of the cold chain;
implementation of WHOs multidose vial policy, when appropriate.

Introducing Haemophilus influenzae type b (Hib) conjugate vaccine into national immunization services

WHO/V&B/01.29
page 3

Hib conjugate vaccine procured through The Vaccine Fund will be supplied with auto-disable syringes and safety boxes. Additional disposable syringes will be needed for lyophilized vaccines that require reconstitution. Managers at each level are responsible for ensuring that adequate supplies are available at all times. Attention should also be given to the proper use and disposal of the safety boxes used to collect these materials.

Immunization Coverage

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

If conducted, supplemental campaigns should target large populations (entire nations or large regions) and achieve coverage of over 90 per cent with safe and high quality service.

Influenza

Influenza vaccines (WHO position paper)

WHO encourages initiatives to raise awareness of influenza and influenza vaccination among healthcare workers and the public, including definition of national targets for immunization programmes.

WHO strongly emphasizes the importance of raising the public consciousness of influenza and its complications as well as of the beneficial effects of influenza vaccination. (page 287)

WER 2005, vol. 80, 36, pp 279-287
page 280

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

SAGE encouraged all countries to consider their preparedness for a potential influenza pandemic, recognizing that it would occur before strain-specific vaccine can be made in significant quantities.

WER 2006, vol. 81, 21, pp 210-220
page 218

JE

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

SAGE requested the updating of the WHO position paper on JE immunization.

WER 2006, vol. 81, 21, pp 210-220
page 216

Measles

Reducing measles mortality in emergencies (WHO/UNICEF Joint Statement)

In emergencies, immunizing children against measles is among the most cost-effective preventive public health measures, particularly for displaced populations housed in camps.

WHO/V&B/04.03
page 2

Reducing measles mortality in emergencies (WHO/UNICEF Joint Statement)

Urgent, structured and coordinated supplementary immunization activities, together with vitamin A supplementation, are the most effective means of reducing measles mortality during and after complex emergencies. UNICEF and WHO will fully support national authorities and other partners to ensure that all children are immunized against measles.

WHO/V&B/04.03
page 3

Reducing measles mortality in emergencies (WHO/UNICEF Joint Statement)

(In complex emergencies) national authorities should develop and implement a measles control plan as rapidly as possible, ensuring high coverage and the maintenance of cold chain/logistics and immunization safety.

WHO/V&B/04.03
page 3

Measles vaccines (WHO position paper)

WER 2004, vol. 79, 14, pp 130-142
page 138

In many countries, large-scale measles (or measles-rubella) SIAs are used to rapidly increase population immunity and bring measles transmission under control. Periodic SIAs may also provide children with a second opportunity for measles immunization as an alternative to routine immunization services. However, the duration of impact of SIAs will be limited unless there is a strong routine immunization programme to prevent the rapid accumulation of susceptible children.

Measles vaccines (WHO position paper)

WER 2004, vol. 79, 14, pp 130-142
page 141

In 2002, the United Nations General Assembly Special Session on Children (World Fit for Children), attended by 191 heads of state, established the goal of a 50% reduction of global measles deaths by the end of 2005 compared with 1999 levels. WHO and the United Nations Childrens Fund have developed a joint strategic plan for measles mortality reduction. The recommended strategy consists of four components: to achieve high (>80%) routine measles vaccination coverage in every district; to provide children with a second opportunity for measles immunization either through the routine immunization services or through periodic supplementary immunization activities; to develop and implement a strong surveillance system; and to improve measles case management. In 2003, the World Health Assembly passed a resolution requesting countries to implement this strategy and to contribute actively and without delay towards achievement of this global goal.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

The goal of the GLOBAL MEASLES STRATEGIC PLAN is:
_ To halve the annual number of measles deaths by 2005.
_ To achieve and maintain interruption of indigenous measles transmission in large geographical areas with established elimination goals: the Region of the Americas by 2000 (nearly achieved); the European Region by 2007; and the Eastern Mediterranean Region by 2010.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 4

Strategies for achieving sustainable reduction of measles mortality:
Goal: Reduce the number of annual measles deaths by half by 2005.
1. Routine immunization: achieve >90% routine vaccination coverage (in each district and nationally) with at least one dose of measles vaccine administered at 9 months of age or shortly thereafter.
2. Second opportunity for measles vaccination: for all children through routine or supplemental activities.
3. Measles surveillance: establish effective surveillance for measles to report regularly the number, age and vaccination status of children contracting or dying from measles, to conduct outbreak investigations and to monitor immunization coverage.
4. Improve management of complicated cases: including vitamin A supplementation and adequate treatment of complications.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 4

Strategies for achieving and maintaining interruption of indigenous measles transmission
Goal: Achieve and maintain interruption of indigenous measles transmission in large geographical areas.
1. Routine immunization: achieve very high (i.e. > 95%) immunization coverage (in each district and nationally) with the first dose of measles vaccine administered through routine services.
2. Second opportunity for measles vaccination: to maintain the number of susceptible population below the critical threshold for herd immunity.
3. Measles surveillance: investigation and laboratory testing of all suspected measles cases (case-based surveillance). Isolation of measles virus should be attempted from all chains of transmission.
4. Improve management of complicated cases: including vitamin A supplementation and adequate treatment of complications.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

If conducted, supplemental campaigns should target large populations (entire nations or large regions) and achieve coverage of over 90 per cent with safe and high quality service.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

Measles immunization provides an opportunity to reach children with other measures that improve overall child health, including:
_ supplemental vitamin A doses;
_ rubella immunization and surveillance activities.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 4

Countries are encouraged to:
_ Assess progress on measles control. They should also review their measles epidemiology.
_ Identify the reasons for low routine coverage.
_ Take advantage of the priority given to measles to improve immunization safety. The safety of immunization is based on ensuring that the following elements are addressed: behavioural change, the provision of safe injection equipment (e.g., auto-disable syringes and safety boxes) and the adequate management and disposal of immunization waste.
_ Plan and integrate measles activities with other health initiatives.
_ Use advocacy for measles mortality reduction to promote the further development of routine immunization services.
_ Develop a 3- to 5-year plan for measles mortality reduction. Countries should develop plans together with the national inter-agency coordinating committees. Measles plans should be part of a comprehensive plan for strengthening immunization services.

Measles vaccines (WHO position paper)

WER 2004, vol. 79, 14, pp 130-142
page 132

Although global measles eradication may be technically feasible, a step-wise elimination strategy, such as that implemented by many industrialized countries and now also adopted by 4 of 6 WHO regions, may be more realistic. The strategy of strengthening routine immunization services, combined with periodic SIAs, has proved costeffective in developed as well as in less-developed countries. However, the initial focus should be on reducing measles morbidity and mortality in countries where the burden of the disease is highest.

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 2: The vaccines

WHO/IVB/04.06
page 6

All children should have a second opportunity to receive measles vaccine. This increases the proportion of children who receive at least one dose and helps to assure measles immunity in previously vaccinated children who failed to develop such immunity. This opportunity may be delivered either through routine immunization services or through periodic mass campaigns.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 219

SAGE considered that the GIVS goal of 90% (measles) mortality reduction by 2010 remained appropriate. SAGE recommended that work be undertaken to prepare for discussions on the feasibility of a global elimination goal.

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

WHO/IVB/05.11
page 2

The objectives of the four-part strategy (for sustainable measles mortality reduction that was endorsed by the World Health Assembly in 2003) are to:
1. provide every child with a dose of measles vaccine by 12 months of age;
2. give all children from nine months to 15 years of age a second opportunity for measles immunization;
3. establish effective surveillance; and
4. improve clinical management of complicated cases, including vitamin A supplementation.

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

WHO/IVB/05.11
page 3

(T)he global goal now is to reduce annual global measles deaths by 90% by 2010 from 2000 estimates.
In 2000, the UN Millennium Summit set a goal to reduce the under-five mortality rate by two-thirds, between 1990 and 2015.

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

WHO/IVB/05.11
page 3

In conflict or emergency areas, WHO and UNICEF have a commitment to ensure that, at a minimum, measles vaccine and vitamin A supplements are administered. (WHO/UNICEF joint statement: reducing measles mortality in emergencies, 2002.)

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

WHO/IVB/05.11
page 3

The primary responsibility for reducing measles deaths lies with national governments.

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

WHO/IVB/05.11
page 4

It is important that measles activities be fully integrated into multi-year immunization plans.

To maximize the impact of the strategy and ensure continuity in sustainable measles mortality reduction activities, measles activities must be included in national immunization financial sustainability plans.

The majority of resources for measles mortality reduction activities need to be mobilized from national governments and their local partners. International partners can help to fill financing gaps, but should not be considered as a primary source for long-term funding.

Mumps

Mumps virus vaccines (WHO position paper)

WER 2001, vol. 76, 45, pp 346-356
page 354

Countries considering inclusion of mumps vaccination into their national immunization programme should set disease-control targets (elimination or control) and design their immunization strategies accordingly.

Mumps virus vaccines (WHO position paper)

WER 2001, vol. 76, 45, pp 346-356
page 355

Strategies to achieve mumps elimination may include: (1) high (>90%) coverage with a first dose of vaccine containing mumps at the age of 12-18 months; (2) ensuring a second opportunity for vaccination; and (3) conducting a catch-up immunization of susceptible cohorts.

Mumps virus vaccines (WHO position paper)

WER 2001, vol. 76, 45, pp 346-356
page 355

Countries planning to use mumps vaccine during mass campaigns should give special attention to planning, including critical review of the mumps vaccine strain selected, provision of guidelines for monitoring, investigation and management of AEFIs (which tend to be more noticeable in a campaign setting), and training of health workers on expected rates of AEFIs, as well as community advocacy and health education.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 214

SAGE requested that the WHO position paper on mumps vaccines be revised, drawing on the conclusions and recommendations from the recent consultation on use of mumps vaccine in the Eastern Mediterranean Region. The revision should take into consideration the accumulating global experience that high coverage with 2 doses of measlesmumpsrubella vaccine (MMR) is required to effectively prevent mumps outbreaks.

New Vaccines

Introducing Haemophilus influenzae type b (Hib) conjugate vaccine into national immunization services

WHO/V&B/01.29
page 3

Adding Hib conjugate vaccine to the national immunization programme will require:
 an assessment of cold chain storage capacity and cold chain procedures at all administrative levels; and,
 development and implementation of plans to modify cold chain storage capacity and cold chain procedures, if needed.

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 3

Adding HepB vaccine to the national immunization schedule will require cold chain assessments at all administrative levels:
_ to assure adequate storage capacity is available, and
_ to assure policies and procedures are in place to prevent freezing of HepB vaccine.

Pneumococcal

Pneumococcal conjugate vaccine for childhood immunization (WHO position paper)

WER 2006, vol. 82, 10, pp 93-104
page 97

Although infection with pneumococci accounts for a substantial proportion of the estimated 2 million deaths from pneumonia occurring in children, the use of pneumococcal vaccine should be seen as complementary to the use of other pneumonia-control measures, including appropriate case management and the reduction of exposure to known risk factors, such as indoor pollutants, tobacco smoke, premature weaning and nutritional deficiencies.

Policy

Proper handling and reconstitution of vaccines avoids programme errors

V&B update 34
page 3

Vaccinators and store keepers should always:
_Include diluents in stock control and ensure adequate supplies.
_Check that the vaccines have been supplied with the right diluent. If any error is noted, the vaccine should not be used and the supervisor must be notified immeditely.
_Ensure the volume of diluent used is correct so that the proper number of doses per vial is obtained.

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 3

Since hepatitis B vaccines are more expensive than the traditional EPI vaccines, it is important to monitor HepB vaccine wastage and to develop and implement strategies to reduce wastage.
Strategies to reduce wastage include:
_ careful planning of vaccine ordering and distribution;
_ implementation of WHOs multidose vial policy;
_ appropriate use of single-dose and multi-dose vials;
_ careful maintenance of the cold chain;
_ attention to vaccine security; and
_ reducing missed opportunities for immunization.

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 3

HepB vaccine procured through The Vaccine Fund will be supplied with AD syringes and safety boxes. Managers at each level are responsible for ensuring that adequate supplies are available at all times so that each injection is given with a sterile injection device. Attention should also be given to proper use and disposal of safety boxes to collect these materials.

Introducing hepatitis B vaccine into national immunization services

WHO/V&B/01.28
page 4

Issues to consider in choosing a monovalent or combination HepB vaccine for national immunization schedules include:
flexibility in adding the vaccine to the national immunization schedule; impact on cold chain capacity; the number of injections per visit; vaccine security; impact on local vaccine production; and cost.

Use of combination vaccines (e.g. DTP-HepB vaccine) may offer certain programmatic advantages. These include: a decreased number of injections required per visit (and thus decrease the number of needles and syringes required); and a decrease in the amount of space required for cold chain storage and transport.

Introducing Haemophilus influenzae type b (Hib) conjugate vaccine into national immunization services

WHO/V&B/01.29
page 3

Adding Hib conjugate vaccine to the national immunization programme will require:
- an assessment of cold chain storage capacity and cold chain procedures at all administrative levels; and,
- development and implementation of plans to modify cold chain storage capacity and cold chain procedures, if needed.

Introducing Haemophilus influenzae type b (Hib) conjugate vaccine into national immunization services

WHO/V&B/01.29
page 3

Monitoring (Hib vaccine wastage) increases ordering accuracy and reduces wastage by providing reliable data for estimating the number and size of vials to be ordered. It also serves as a tool for improving the practices of health centres when wastage rates are found to be unacceptably high. Strategies to reduce vaccine wastage include the following:
- careful planning of vaccine ordering and distribution;
- use of both single-dose and multidose vials ;
- careful maintenance of the cold chain;
- implementation of WHOs multidose vial policy, when appropriate.

Introducing Haemophilus influenzae type b (Hib) conjugate vaccine into national immunization services

WHO/V&B/01.29
page 3

Hib conjugate vaccine procured through The Vaccine Fund will be supplied with auto-disable syringes and safety boxes. Additional disposable syringes will be needed for lyophilized vaccines that require reconstitution. Managers at each level are responsible for ensuring that adequate supplies are available at all times. Attention should also be given to the proper use and disposal of the safety boxes used to collect these materials.

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 6

Essential immunization services should be free of charge.

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 12

The UNICEF-WHO Bamako Initiative endorses the cross-subsidization of immunization services, which are free for card-holders, through other user fees in the health sector including drug charges. This cross-subsidization does not pay for the vaccines themselves, but contributes to the cost of running the immunization services. The Bamako Initiative aims to improve service quality through user fees for curative, but not for preventive health services.

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 18

Essential immunization services should be provided at no charge in order to maintain equitable distribution of these essential services, to combat poverty and to meet public health goals that capture the positive externalities of immunization (herd effect).

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 18

Charges for non-essential vaccines may be justified where there would otherwise be no immunization with these vaccines, where disease awareness is high, and where quality of care is good. In other words, if people are highly motivated to pay for the vaccine for their own personal benefit, and if they have the means to pay for it, then enough people may buy the vaccine for themselves and transmission may be stopped. This is unlikely to be the case for any vaccine or other preventive health measure, and other mechanisms for providing non-essential immunization services should be investigated before deciding to implement user fees. If and when user fees are implemented for non-essential immunization, the following ingredients are critical:

There must be a target group that is willing to pay for non-essential immunization services that would not otherwise be offered.

There must be a transparent and efficient means of identifying those who should and should not be charged user fees, a means of subsidizing the costs of those who cannot pay for essential services, and dissemination of this information to potential users.

Fees charged must be revised periodically and fee-setting options reviewed, including cross-subsidies for immunization.

There must be local capacity to implement and manage the fees, to ensure accountability, and to make sure fee collection achieves its purpose: to expand access to quality care.

Effects of the user fees should be monitored.

Some or all of the fees collected must be used within that health facility.

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 20

User fees should not be used for essential immunization services for the following reasons:

User fees impose a financial barrier to immunization for the poor and discourage parents from seeking immunization for their children.

User fees have proven to be an inefficient and ineffective way to recover costs.

The discouraging effect of user fees is higher among the lowest income groups.

User fees work against efforts to expand immunization coverage.

Immunization has positive externalities that increase significantly over a certain coverage threshold (herd effect), and so it is economically justifiable to finance immunization with public funds.

Immunization against diseases of public health importance is highly costeffective and should have a high priority in allocations of public resources.

Practice and policies on user fees for immunization in developing countries

WHO/V&B/01.07
page 20

Public financing of essential immunization services, accompanied by sound management, is the most equitable funding mechanism.

Reducing measles mortality in emergencies (WHO/UNICEF Joint Statement)

WHO/V&B/04.03
page 2

In emergencies, immunizing children against measles is among the most cost-effective preventive public health measures, particularly for displaced populations housed in camps.

Reducing measles mortality in emergencies (WHO/UNICEF Joint Statement)

WHO/V&B/04.03
page 3

Urgent, structured and coordinated supplementary immunization activities, together with vitamin A supplementation, are the most effective means of reducing measles mortality during and after complex emergencies. UNICEF and WHO will fully support national authorities and other partners to ensure that all children are immunized against measles.

Reducing measles mortality in emergencies (WHO/UNICEF Joint Statement)

WHO/V&B/04.03
page 3

(In complex emergencies) national authorities should develop and implement a measles control plan as rapidly as possible, ensuring high coverage and the maintenance of cold chain/logistics and immunization safety.

Measles vaccines (WHO position paper)

WER 2004, vol. 79, 14, pp 130-142
page 138

In many countries, large-scale measles (or measles-rubella) SIAs are used to rapidly increase population immunity and bring measles transmission under control. Periodic SIAs may also provide children with a second opportunity for measles immunization as an alternative to routine immunization services. However, the duration of impact of SIAs will be limited unless there is a strong routine immunization programme to prevent the rapid accumulation of susceptible children.

Measles vaccines (WHO position paper)

WER 2004, vol. 79, 14, pp 130-142
page 141

In 2002, the United Nations General Assembly Special Session on Children (World Fit for Children), attended by 191 heads of state, established the goal of a 50% reduction of global measles deaths by the end of 2005 compared with 1999 levels. WHO and the United Nations Childrens Fund have developed a joint strategic plan for measles mortality reduction. The recommended strategy consists of four components: to achieve high (>80%) routine measles vaccination coverage in every district; to provide children with a second opportunity for measles immunization either through the routine immunization services or through periodic supplementary immunization activities; to develop and implement a strong surveillance system; and to improve measles case management. In 2003, the World Health Assembly passed a resolution requesting countries to implement this strategy and to contribute actively and without delay towards achievement of this global goal.

Getting started with vaccine vial monitors

WHO/V&B/02.35
page 14

Lower rates of vaccine wastage associated with the multi-dose vial policy should encourage the re-establishment of the policy of immunization at every opportunity and more frequent immunization sessions.

Getting started with vaccine vial monitors

WHO/V&B/02.35
page 14

Quantities of vaccine discarded because of a VVM indication of excessive heat exposure should be specifically noted on inventory forms and reported to supervisors, who should review the vaccine wastage statistics and strengthen the cold chain, supervise vaccine administration or change vaccine orders as appropriate.

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 1: Target diseases

WHO/IVB/04.06
page 14

All member states of WHO agreed in 1988 to eradicate polio, and WHO aims to certify the world as free of the disease by 2005.

There are four core strategies to stop transmission of the wild poliovirus and certify all WHO regions polio-free by the end of 2005 (page 15):
- high infant immunization coverage with four doses of oral polio vaccine in the first year of life;
- supplementary doses of oral polio vaccine to all children under five years of age during national immunization days (NIDS);
- surveillance for wild poliovirus through reporting and laboratory testing of all cases of acute flaccid paralysis (AFP) among children under fifteen years of age;
- targeted mop-up campaigns once wild poliovirus transmission is limited to a specific focal area.

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 1: Target diseases

WHO/IVB/04.06
page 20

WHO, UNICEF and UNFPA agreed to set the year 2005 as the target date for worldwide elimination of neonatal tetanus. This implies the reduction of neonatal tetanus incidence to below one case per 1000 live births per year in every district.
Because tetanus survives in the environment, eradication of the disease is not feasible and high levels of immunization have to continue even after the goal has been achieved.
To achieve the elimination goal, countries implement a series of strategies:
Improve the percentage of pregnant women immunized with vaccines containing tetanus toxoid.
Administer vaccines containing tetanus toxoid to all women of childbearing age in high-risk areas. This is usually implemented through a three round campaign approach.
Promote clean delivery and childcare practices.
Improve surveillance and reporting of neonatal tetanus cases.

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 1: Target diseases

WHO/IVB/04.06
page 33

The main strategies to control yellow fever are based on a combination of immunization for protection against the disease and surveillance, and are outlined below.
Prevention:
administering yellow fever vaccine as part of routine infant immunization;*
preventing outbreaks in high-risk areas through mass campaigns;*
control of Aedus aegypti in urban centres.
* Both these strategies should ensure a minimum coverage of at least 80%.
Control
instituting a sensitive and reliable YF surveillance system including laboratory capacity to analyse samples and confirm suspected cases;
emergency response to outbreaks through mass campaigns.

WHO-UNICEF effective vaccine store management initiative: Modules 1 - 4

WHO/IVB/04.16-20
page 2

(O)nly vaccine stocks which are fit for use should be included in stock records. Damaged or expired vaccines should not appear in the available stock balance. If such vaccines do need to be kept until accounting or auditing procedures have been completed, details should be recorded on a separate page or card, pending disposal.

Adopting global vaccine management policies for national use

WHO/V&B/02.32
page 6

Before investing the effort necessary to change a policy, make sure that the policy addresses issues of local importance and is of personal interest to key stakeholders.

Adopting global vaccine management policies for national use

WHO/V&B/02.32
page 4

(When a global policy is issued, the) policy should be distributed to national and subnational staff of immunization services, leading scientists and principal decision-makers. The objective is to raise awareness about the new policy among a broad circle of experts so that they can begin to digest and analyse the policy, discuss it informally, form their opinions and formulate the feedback and the questions that need to be answered.

When seeking input, specify which parts of the policy are open to comment and which are not. Components of the policy determined by evidence from scientific studies should not be modified unless additional evidence from well-designed studies becomes available. If local research becomes available which supports different conclusions it should be offered to the international scientific community for peer discussion. The key role of local scientists and technical experts in the development of national policies is thus to ensure that the scientific content of policies is not changed in ways that compromise efficacy or patient safety.

In order to ensure that science-based portions of (a global) policy are not changed inappropriately, technical experts should review the final drafts of the document.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

The goal of the GLOBAL MEASLES STRATEGIC PLAN is:
_ To halve the annual number of measles deaths by 2005.
_ To achieve and maintain interruption of indigenous measles transmission in large geographical areas with established elimination goals: the Region of the Americas by 2000 (nearly achieved); the European Region by 2007; and the Eastern Mediterranean Region by 2010.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 4

Strategies for achieving sustainable reduction of measles mortality:
Goal: Reduce the number of annual measles deaths by half by 2005.
1. Routine immunization: achieve >90% routine vaccination coverage (in each district and nationally) with at least one dose of measles vaccine administered at 9 months of age or shortly thereafter.
2. Second opportunity for measles vaccination: for all children through routine or supplemental activities.
3. Measles surveillance: establish effective surveillance for measles to report regularly the number, age and vaccination status of children contracting or dying from measles, to conduct outbreak investigations and to monitor immunization coverage.
4. Improve management of complicated cases: including vitamin A supplementation and adequate treatment of complications.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 4

Strategies for achieving and maintaining interruption of indigenous measles transmission
Goal: Achieve and maintain interruption of indigenous measles transmission in large geographical areas.
1. Routine immunization: achieve very high (i.e. > 95%) immunization coverage (in each district and nationally) with the first dose of measles vaccine administered through routine services.
2. Second opportunity for measles vaccination: to maintain the number of susceptible population below the critical threshold for herd immunity.
3. Measles surveillance: investigation and laboratory testing of all suspected measles cases (case-based surveillance). Isolation of measles virus should be attempted from all chains of transmission.
4. Improve management of complicated cases: including vitamin A supplementation and adequate treatment of complications.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

If conducted, supplemental campaigns should target large populations (entire nations or large regions) and achieve coverage of over 90 per cent with safe and high quality service.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

Measles immunization provides an opportunity to reach children with other measures that improve overall child health, including:
_ supplemental vitamin A doses;
_ rubella immunization and surveillance activities.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 4

Countries are encouraged to:
_ Assess progress on measles control. They should also review their measles epidemiology.
_ Identify the reasons for low routine coverage.
_ Take advantage of the priority given to measles to improve immunization safety. The safety of immunization is based on ensuring that the following elements are addressed: behavioural change, the provision of safe injection equipment (e.g., auto-disable syringes and safety boxes) and the adequate management and disposal of immunization waste.
_ Plan and integrate measles activities with other health initiatives.
_ Use advocacy for measles mortality reduction to promote the further development of routine immunization services.
_ Develop a 3- to 5-year plan for measles mortality reduction. Countries should develop plans together with the national inter-agency coordinating committees. Measles plans should be part of a comprehensive plan for strengthening immunization services.

WHO-UNICEF guidelines for developing a comprehensive multi-year plan (cMYP)

WHO/IVB/05.20
page 3

The decision to develop a cMYP should be made by each country, taking into account the timing of existing national planning instruments (e.g. health sector plans, annual budgets and medium-term expenditure frameworks). Ideally the timing should be fully synchronized with the health sector planning process. If not fully synchronized, a new cMYP should be prepared a year before the expiry of the current multi-year plan, and should not extend beyond the limit of the health sector plan.

(T)he objectives, strategies, cost and financing information from the cMYP should be integrated within the national health plan and budget.

BCG vaccine (WHO position paper)

WER 2004, vol. 79, 4, pp 27-38
page 38

To change from general to selective BCG vaccination, an efficient notification system must be in place in addition to the following criteria:
 an average annual notification rate of smear-positive pulmonary TB cases below 5 per 100 000; or
 an average annual notification rate of tuberculous meningitis in children aged under five years below 1 per 10 million population during the previous five years; or
 an average annual risk of tuberculous infection below 0.1%.

Influenza vaccines (WHO position paper)

WER 2005, vol. 80, 36, pp 279-287
page 280

WHO encourages initiatives to raise awareness of influenza and influenza vaccination among healthcare workers and the public, including definition of national targets for immunization programmes.

WHO strongly emphasizes the importance of raising the public consciousness of influenza and its complications as well as of the beneficial effects of influenza vaccination. (page 287)

Measles vaccines (WHO position paper)

WER 2004, vol. 79, 14, pp 130-142
page 132

Although global measles eradication may be technically feasible, a step-wise elimination strategy, such as that implemented by many industrialized countries and now also adopted by 4 of 6 WHO regions, may be more realistic. The strategy of strengthening routine immunization services, combined with periodic SIAs, has proved costeffective in developed as well as in less-developed countries. However, the initial focus should be on reducing measles morbidity and mortality in countries where the burden of the disease is highest.

Introduction of inactivated poliovirus vaccine into oral poliovirus vaccine-using countries (WHO position paper)

WER 2003, vol. 78, 28, pp 241-250
page 241

Vaccination against polio will need to continue (at least until poliovirus transmission has been interrupted globally) because of the threat of wild poliovirus importation. However, an increasing number of polio-free countries are determining that the risk of paralytic poliomyelitis associated with continued routine immunization using oral poliovirus vaccine (OPV) is greater than the risk of importation or laboratory handling of wild poliovirus. Some of these countries have introduced inactivated poliovirus vaccine (IPV) a safe and effective alternative for routine immunization using one of two approaches: replacement of OPV by IPV and introduction of a sequential IPV/OPV schedule (in which 13 doses of IPV would be followed by 23 doses of OPV.) Tropical developing countries pose a special challenge for policy formulation on IPV. In these countries, given the unresolved issues related to the immunogenicity of IPV when administered in the WHO/Expanded Programme on Immunization (EPI) vaccination schedule, the continued focal circulation of wild poliovirus on two continents, the relatively high cost of IPV and the operational complexities of introducing this vaccine, WHO does not as of July 2003 recommend the adoption of IPV alone or in a sequential schedule. It is expected that this position will be reviewed late 2004 and, if appropriate, revised according to the additional information that has become available on IPV effectiveness, logistic implications, and on further progress towards polio eradication. WHO is encouraging operational studies and introduction projects to evaluate these issues.

Introduction of inactivated poliovirus vaccine into oral poliovirus vaccine-using countries (WHO position paper)

WER 2003, vol. 78, 28, pp 241-250
page 242

In 1988 a global eradication target (was set) by the World Health Assembly (to be accomplished by 2000). The polio eradication initiative developed the following four strategies: (i) achieving and maintaining high routine infant vaccination coverage with OPV; (ii) establishing surveillance for poliomyelitis and poliovirus through acute flaccid paralysis (AFP) notifications and laboratory investigation; (iii) conducting mass OPV campaigns (i.e. national immunization days or NIDs) to eliminate widespread circulation of wild poliovirus; and (iv) carrying out house-to-house OPV mop-up campaigns to interrupt any remaining chains of transmission.

Rubella vaccines (WHO position paper)

WER 2000, vol. 75, 20, pp 161-169
page 162

The primary purpose of rubella vaccination is to prevent the occurrence of congenital rubella infection including CRS.

Rubella vaccines (WHO position paper)

For countries wishing to prevent the occurrence of congenital rubella infection including CRS, 2 approaches are recommended: (a) prevention of CRS only, through immunization of adolescent girls and/or women of childbearing age; or (b) elimination of rubella as well as CRS through universal vaccination of infants, surveillance and assuring immunity in women of childbearing age. Decisions on which approach is taken should be based on the level of susceptibility in women of childbearing age, the burden of disease due to CRS, strength of the basic immunization programme as indicated by routine measles coverage, infrastructure and resources for child and adult immunization programmes, assurance of injection safety, and other disease priorities.

WER 2000, vol. 75, 20, pp 161-169
page 168

Rubella vaccines (WHO position paper)

Countries wishing to prevent CRS should immunize adolescent girls and/or women of childbearing age. The precise target population addressed will depend on susceptibility profile, cultural acceptability and operational feasibility. The most rapid impact would be achieved by mass campaigns for women of childbearing age (and men preferably). For increased impact even men should be vaccinated. Vaccination through routine services could ultimately achieve the same protection, but after a delay during which CRS cases will still occur.

WER 2000, vol. 75, 20, pp 161-169
page 169

Yellow fever vaccine (WHO position paper)

In countries at risk for YF (yellow fever), the use of the 17D vaccine is the main strategy recommended to rapidly build up YF immunity in the population at large. This prevention strategy has two components. The first component is the inclusion of the 17D vaccine in national childhood immunization programmes.

The second component is the implementation of mass preventive vaccination campaigns to protect susceptible older age groups. In the event of limited resources, assessment of the degree of risk can help prioritize areas for mass preventive campaigns.

WER 2003, vol. 78, 40, pp 349-359
page 350

Yellow fever vaccine (WHO position paper)

YF (yellow fever) vaccine should be offered to all travellers to and from at-risk areas, unless they belong to the group of individuals for whom YF vaccination is contraindicated. There is currently insufficient scientific evidence to support a change in the International health regulations for travelers to endemic areas demanding proof of valid YF vaccination within the preceding ten years. However, in at-risk countries, vaccination resources should be directed to ensuring good primary vaccination coverage rather than to providing booster doses.

WER 2003, vol. 78, 40, pp 349-359
page 350

Yellow fever vaccine (WHO position paper)

Given the very rare, but potentially severe, adverse effects, YF (yellow fever) vaccine for travellers should be administered on strict indications only, particularly in the elderly. Restriction of YF vaccination to authorized centres is likely to promote the appropriate use of YF vaccine.

WER 2003, vol. 78, 40, pp 349-359
page 358

Yellow fever vaccine (WHO position paper)

To avoid devastating outbreaks of YF (yellow fever) in the future, YF vaccine must be fully introduced into well functioning childhood vaccination programmes. In addition, childhood vaccination should be combined with pre-emptive YF vaccination campaigns in atrisk areas, and in urban areas control efforts directed against Ae. aegypti should be increased. In areas of predominantly jungle-type transmission, YF vaccination of persons belonging to the high-risk groups is strongly recommended.

WER 2003, vol. 78, 40, pp 349-359
page 358

Diphtheria vaccine (WHO position paper)

The occurrence of diphtheria reflects inadequate coverage of the national childhood immunization programme. Therefore, obstacles to optimal vaccine delivery must be identified and forceful measures taken to improve immunization coverage.

WER 2006, vol. 81, 3, pp 24-32
page 25

Diphtheria vaccine (WHO position paper)

Adequate quantities of diphtheria antitoxin should be available nationally or regionally for medical management of cases.
Diphtheria antitoxin is not recommended for prophylaxis.

WER 2006, vol. 81, 3, pp 24-32
page 25

WHO recommended standards for surveillance of selected vaccine-preventable diseases

Hepatitis B is targeted by WHO for reduced incidence/prevalence.

WHO/V&B/03.01
page 1

Introducing hepatitis B vaccine into national immunization services

Adding HepB vaccine to the national immunization schedule will require cold chain assessments at all administrative levels:
_ to assure adequate storage capacity is available, and
_ to assure policies and procedures are in place to prevent freezing of HepB vaccine.

WHO/V&B/01.28
page 3

Vaccine introduction guidelines. Adding a vaccine to a national immunization programme: decision and implementation

In countries with a dispersed population and extensive outreach, a higher wastage rate may be acceptable not to lose programme efficiency. Therefore, the appropriate goal is wastage optimization, which means to minimize preventable wastage without compromising coverage or safety.

WHO/IVB/05.18
page 34

Vaccine introduction guidelines. Adding a vaccine to a national immunization programme: decision and implementation

Where possible, wastage should be categorized into opened and unopened vial wastage, analysed by each administrative level, and compared with coverage data.

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page 35

Vaccine introduction guidelines. Adding a vaccine to a national immunization programme: decision and implementation

WHO/IVB/05.18
page 40

A key aspect of getting disease data is to compare it with coverage data to ensure that the impact on disease is in line with what is expected for the level of coverage in that area. Obtaining the immunization status of all disease cases, and comparing immunization coverage of cases with immunization coverage in the overall population provides a method of estimating vaccine effectiveness that is also useful for programme monitoring. However, there are important biases in the method, so the estimates need to be carefully interpreted.

Ensuring the quality of vaccines at country level: Guidelines for health staff

WHO/V&B/02.16
page 17

Remember, only vaccine stocks that are fit for use should be included in stock records. Any expired vials, heat-damaged vials or vials with VVMs beyond the discard point should not appear in the available stock balance. If such vaccines have to be retained for some time, e.g. until accounting or auditing procedures have been completed, they should be recorded on a separate page or card until disposal takes place.

Guidelines for the international procurement of vaccines and sera

WHO/VSQ/98.05
page 11

Vaccination demand (forecasting): This should:
be established preferably on a five-year plan by vaccine;
take into account calculated discard rates, based on an accurate reporting system;
integrate not only routine but also special needs like NIDs or specific campaign(s).

Mumps virus vaccines (WHO position paper)

WER 2001, vol. 76, 45, pp 346-356
page 354

Countries considering inclusion of mumps vaccination into their national immunization programme should set disease-control targets (elimination or control) and design their immunization strategies accordingly.

Mumps virus vaccines (WHO position paper)

WER 2001, vol. 76, 45, pp 346-356
page 355

Strategies to achieve mumps elimination may include: (1) high (>90%) coverage with a first dose of vaccine containing mumps at the age of 12-18 months; (2) ensuring a second opportunity for vaccination; and (3) conducting a catch-up immunization of susceptible cohorts.

Mumps virus vaccines (WHO position paper)

WER 2001, vol. 76, 45, pp 346-356
page 355

Countries planning to use mumps vaccine during mass campaigns should give special attention to planning, including critical review of the mumps vaccine strain selected, provision of guidelines for monitoring, investigation and management of AEFIs (which tend to be more noticeable in a campaign setting), and training of health workers on expected rates of AEFIs, as well as community advocacy and health education.

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 2: The vaccines

WHO/IVB/04.06
page 6

All children should have a second opportunity to receive measles vaccine. This increases the proportion of children who receive at least one dose and helps to assure measles immunity in previously vaccinated children who failed to develop such immunity. This opportunity may be delivered either through routine immunization services or through periodic mass campaigns.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 214

SAGE requested that the WHO position paper on mumps vaccines be revised, drawing on the conclusions and recommendations from the recent consultation on use of mumps vaccine in the Eastern Mediterranean Region. The revision should take into consideration the accumulating global experience that high coverage with 2 doses of measlesmumpsrubella vaccine (MMR) is required to effectively prevent mumps outbreaks.

Tetanus vaccine (WHO position paper)

WER 2006, vol. 81, 20, pp 198-208
page 199

The goals of tetanus control are primarily (i) to eliminate MNT globally (<1 case per 1000 live births at the district level); and (ii) to achieve and sustain high coverage of 3 doses of DTP and of appropriate booster doses in order to prevent tetanus in all age groups.

Tetanus vaccine (WHO position paper)

WER 2006, vol. 81, 20, pp 198-208
page 206

All (tetanus vaccine) doses received over an individuals lifetime should be recorded on their lifelong vaccination card.

State of the art of new vaccines: research and development

WHO/IVB/06.01
page 89

Of importance for the supply of rabies vaccine is the use of the intradermal route schedule which reduces the number of vaccine vials and thereby the cost of PEP by up to 80% (US$ 5-10 for vaccine alone).

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

WHO/IVB/05.11
page 2

The objectives of the four-part strategy (for sustainable measles mortality reduction that was endorsed by the World Health Assembly in 2003) are to:
1. provide every child with a dose of measles vaccine by 12 months of age;
2. give all children from nine months to 15 years of age a second opportunity for measles immunization;
3. establish effective surveillance; and
4. improve clinical management of complicated cases, including vitamin A supplementation.

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

WHO/IVB/05.11
page 3

(T)he global goal now is to reduce annual global measles deaths by 90% by 2010 from 2000 estimates.
In 2000, the UN Millennium Summit set a goal to reduce the under-five mortality rate by two-thirds, between 1990 and 2015.

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

WHO/IVB/05.11
page 3

In conflict or emergency areas, WHO and UNICEF have a commitment to ensure that, at a minimum, measles vaccine and vitamin A supplements are administered. (WHO/UNICEF joint
statement: reducing measles mortality in emergencies, 2002.)

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

WHO/IVB/05.11
page 3

The primary responsibility for reducing measles deaths lies with national governments.

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

WHO/IVB/05.11
page 4

It is important that measles activities be fully integrated into multi-year immunization plans.

To maximize the impact of the strategy and ensure continuity in sustainable measles mortality reduction activities, measles activities must be included in national immunization financial sustainability plans.

The majority of resources for measles mortality reduction activities need to be mobilized from national governments and their local partners. International partners can help to fill financing gaps, but should not be considered as a primary source for long-term funding.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 0

In conjunction with GIVS (Global Immunization Vision and Strategy), and as a way of implementing GIVS at national level, countries are encouraged to develop their own comprehensive Multi-Year Plans (cMYP) for immunization.

In conjunction with GIVS, countries are encouraged to develop a cMYP for immunization (page 1).

WHO-UNICEF guidelines for developing a comprehensive multi-year plan (cMYP)

WHO/IVB/05.20
page 6

(T)here are real benefits to combining immunization with three other interventions, namely vitamin A (VitA) supplementation, the distribution of insecticide-treated bednets for malaria prevention, and anthelminths.

The cost of integrating the national immunization programme (NIP) service delivery with other health programmes may be incremental to the NIP budget, as some costs might be included in other programme budgets. However, incremental costs such as transport of bednets may need to be included within the immunization budget if not covered elsewhere.

WHO-UNICEF guidelines for developing a comprehensive multi-year plan (cMYP)

WHO/IVB/05.20
page 7

It is recommended that the planning and costing process be a team-building exercise for the national immunization programme. The starting point is a meeting of participants from all sections of the immunization system,

ICC (interagency coordinating committee) members, development partners, and other immunization stakeholders need to be involved in the development of the cMYP.

Engaging with the Ministry of Finance and Ministry of Planning early in this process will be important, since the cMYP includes an assessment of future programme financing, including government resources.

WHO-UNICEF guidelines for developing a comprehensive multi-year plan (cMYP)

WHO/IVB/05.20
page 7

Separate plans made previously for polio, measles, cold chain and MNT need to be fully incorporated into the cMYP.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 1

(P)lanning needs to reflect country priorities, to be aligned with country planning cycles, and to simplify and harmonize procedures.

In summary, the WHO-UNICEF Guidelines for Developing a Comprehensive Multi-Year Plan for Immunization provides a new approach to planning that:
- ensures that the strategies in the plan are sufficiently comprehensive;
- integrates and consolidates activities with other health interventions and within the immunization programme to solve shared problems;
- plans by immunization system components rather than by disease or initiative;
- evaluates the costs and financing of the cMYP to ensure the improved financial management sustainability of the programme;
- links annual work plans to the multi-year plan;
- links to the broader health sector planning and budgeting processes.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 2

It is broadly recognized that strategic planning for immunization requires credible information about cost to achieve the programme objectives, estimate available funding, allocate funds within the programme, and avoid funding shortfalls. For this reason, analysing the costing and financing of a cMYP is a key step in the planning process.

The WHO-UNICEF Guidelines for Developing a Comprehensive Multi-Year Plan for Immunization provides a series of steps to developing a comprehensive plan. . . . Note that the basis of the costing should be the programmatic objectives and milestones.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 5

Although the different planning processes and objectives are not necessarily in competition, reconciling all these in the context of a strategic plan for immunization is not an easy task, and it is therefore important that objectives and priorities are aligned. Similarly, the costing information generated through the cMYP development should link to the relevant consolidated costing and budgeting plan for the health sector. If applicable, it can be useful to link various ongoing exercises such as: poverty reduction strategy papers (PRSP); health sector and public expenditure reviews; budgeting, allocation, and expenditure (MTEF, NHA); and external support and resource mobilization processes (such as donor round tables, SWAp, etc.). This has the effect of increasing the visibility of immunization during health sector planning processes and can increase the chances of mobilizing the resources needed for the programme.

(T)he period covered by resource estimation should be set for five years, as with a longer timeframe, more assumptions need to be made for future projections, and estimates become unreliable. Minimum five-year projections therefore seem useful, especially when linked to annual operational plans and allocations.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 9

Although defining programme objectives and strategies during the development of a cMYP should be based on cost-effectiveness considerations (particularly in relation to new vaccine introduction), the Tool (cMYP Costing and Financing Tool), in its current design, is ill equipped to strengthen such a priority-setting exercise. Likewise, the Tool is not designed to determine allocative efficiency, when a critical consideration in any planning and budgeting exercise must be the efficient use of funds.

(I)n its current format, the Tool does not automatically factor in any scale effect. Ideally, costs would vary as the scale of immunization interventions changed. . . . any scale effect needs to be done manually.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

Before starting the cMYP costing and financing exercise, several principles should be noted.

The first is the importance of creation of leadership and ownership of the cMYP development process within the immunization department of your MoH.

It is equally important to inspire commitment and buy-in to the process, priorities, and strategies for immunization, from the stakeholders represented on the inter-agency coordinating committee (ICC).

Because any costing and financing resource requirement projection exercise will invariably be based on many assumptions, limited data and future uncertainties mean that these assumptions need to be fixed upon in close cooperation and agreement with all stakeholders so that the final estimations for the cMYP will be credible, acceptable, and useful.

Unfortunately, there is no blueprint for the process, and therefore considerable time can be taken up tailoring the cMYP costing and financing exercise to each individual country. The exercise cannot be done in isolation and will need the collaboration of colleagues in the MoH and the MoF, as well as all development partners supporting immunization, for data collection, analysis feedback, and review.

The second principle is the importance of putting together a good team to work on the cMYP costing and financing exercise. It will need to be composed of the right people, with the right skills, and it will need the right amount of time to complete the exercise. A focused and manageable group is needed of no more than three people. It will also be important to decide on who will lead and who will coordinate the team.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 15

The costing exercise needs to account for all the inputs and activities designed to carry out the strategies needed to reach the programme objectives, as defined in the cMYP.

At minimum, it is important to estimate the costs, financing and future resource requirements of each cMYP for all immunization-specific inputs and activities. All inputs and activities that are shared with the immunization programme, such as personnel, transportation and buildings, are optional.

Given the relative difficulty in collecting information on shared costs in a programme and the fact that these costs are not tied to funding that is specifically set aside for immunization (the most relevant for the cMYP costing and financing exercise), the estimation of shared costs is optional.

However, we strongly recommend that these shared costs are taken into account, since in most countries shared inputs are likely to be quite significant. The added investment in time will result in a more accurate costing exercise. By excluding the shared inputs, the analysis will: (a) underestimate the true government contribution to immunization since many of the shared inputs tend to be funded from national resources (especially for personnel costs); (b) underestimate the total cost/resource requirements of the programme if other inputs (such as vehicles) are frequently shared with other programmes.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 15

(T)he main method used is to allocate shared inputs to a programme based on the percentage time spent on immunization.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 15

Estimations of costs, financing and future resource requirements should be made for a particular set of years or time period.
One past year. The rationale for looking at a past year is to have a baseline reference year from which comparisons can be made between how much the programme currently costs, and what will be the future resources required.
Between 3 and 5 future years. This is considered the standard period for making future projections of costs and resource requirements in a comprehensive multi-year plan (cMYP), especially if this is linked to annual operational plans.
Optional forecast (beyond 5 years). In some instances, it may be useful to forecast the costs and resource requirements for the programme beyond the 35 year planning cycle of the cMYP.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 20

Because the final costs/resource requirement estimates are reported in US dollars, a standard inflation rate of 2% is recommended.
Note that this is a default (2%) US dollar inflation rate and not a local currency inflation rate. (page 27)

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 32

The current convention is to make projections of vaccine requirements based on births.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 34

Because the future price evolution of vaccines is uncertain, the methodology used in the Tool (cMYP costing and financing tool) recommends making projections based on constant prices. In other words, to forecast the future needs of vaccines based on the last available year of vaccine price available, and to use the same prices for the entire projection period (up to five years.)

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 39

It is important to note the WHO-UNICEF recommendations for the forecasting of vaccines that have more than a one dose schedule, and that these should be based on the first dose coverage target of these vaccines.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 40

(I)f it is difficult to measure the proportion of vehicles or buildings costs that are allocated to immunization, you can simply use staff time devoted to the programme as a way of allocating the value of shared vehicles and buildings costs, and this will give a good approximation.

Collecting data on the percentage time spent on immunization is time-consuming, but this information will more accurately reflect the amount of government input to the programme, and so reporting shared personnel costs is invaluable.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 77

(I)t is difficult to make accurate predictions about future financing trends, particularly as governments and external partners are often unable to make long-term commitments for funding. It will be necessary to make the most reliable projections possible through: (1) diagnosis of the macroeconomic and health sector environment in which the immunization programme operates; (2) discussions with focal points at the MoH Finance Department, the MoF, and ICC partners.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 90

(I)t is widely considered that focusing too strongly on campaigns at the expense of routine delivery systems is not sustainable in the long term. It is important to ensure that campaigns complement routine activities, rather than the reverse.

Immunization costing & financing: a tool and user guide for comprehensive multi-year planning (cMYP)

WHO/IVB/06.15
page 95

The cMYP costing and financing exercise should not be regarded as a one-off exercise, but needs to be updated in conjunction with the annual planning exercise, or as programme objectives and goals change, or are adjusted.

The Tool (cMYP Costing and Financing Tool) is designed to make annual updates relatively straightforward, and we strongly encourage that you do this.

The WHO-UNICEF Guidelines for Developing a Comprehensive Multi-Year Plan (cMYP) for Immunization recommend that for every year of the cMYP period, an annual workplan be prepared for the forthcoming year, and that this should include relevant costing and financing elements. Strong annual and multi-year planning, in conjunction with a budgeting process, is absolutely essential to plan for, monitor and manage the immunization programme, and to ensure that enough money is available to support planned inputs and activities aimed at reaching objectives and targets.

Pneumococcal conjugate vaccine for childhood immunization (WHO position paper)

WER 2006, vol. 82, 10, pp 93-104
page 97

Although infection with pneumococci accounts for a substantial proportion of the estimated 2 million deaths from pneumonia occurring in children, the use of pneumococcal vaccine should be seen as complementary to the use of other pneumonia-control measures, including appropriate case management and the reduction of exposure to known risk factors, such as indoor pollutants, tobacco smoke, premature weaning and nutritional deficiencies.

Getting started with vaccine vial monitors

WHO/V&B/02.35
page 13

With use of VVMs and the implementation of the multi-dose vial policy, (t)he wastage factor should be checked and adjusted by measuring vaccine wastage changes, particularly in areas where:
- wastage is already high;
- the cold chain is weak;
- vaccine is beginning to be taken out of the cold chain.

Polio

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 1: Target diseases

WHO/IVB/04.06
page 14

All member states of WHO agreed in 1988 to eradicate polio, and WHO aims to certify the world as free of the disease by 2005.

There are four core strategies to stop transmission of the wild poliovirus and certify all WHO regions polio-free by the end of 2005 (page 15):
high infant immunization coverage with four doses of oral polio vaccine in the first year of life;
supplementary doses of oral polio vaccine to all children under five years of age during national immunization days (NIDS);
surveillance for wild poliovirus through reporting and laboratory testing of all cases of acute flaccid paralysis (AFP) among children under fifteen years of age;
targeted mop-up campaigns once wild poliovirus transmission is limited to a specific focal area.

Introduction of inactivated poliovirus vaccine into oral poliovirus vaccine-using countries (WHO position paper)

WER 2003, vol. 78, 28, pp 241-250
page 241

Vaccination against polio will need to continue (at least until poliovirus transmission has been interrupted globally) because of the threat of wild poliovirus importation. However, an increasing number of polio-free countries are determining that the risk of paralytic poliomyelitis associated with continued routine immunization using oral poliovirus vaccine (OPV) is greater than the risk of importation or laboratory handling of wild poliovirus. Some of these countries have introduced inactivated poliovirus vaccine (IPV) a safe and effective alternative for routine immunization using one of two approaches: replacement of OPV by IPV and introduction of a sequential IPV/OPV schedule (in which 13 doses of IPV would be followed by 23 doses of OPV.) Tropical developing countries pose a special challenge for policy formulation on IPV. In these countries, given the unresolved issues related to the immunogenicity of IPV when administered in the WHO/Expanded Programme on Immunization (EPI) vaccination schedule, the continued focal circulation of wild poliovirus on two continents, the relatively high cost of IPV and the operational complexities of introducing this vaccine, WHO does not as of July 2003 recommend the adoption of IPV alone or in a sequential schedule. It is expected that this position will be reviewed late 2004 and, if appropriate, revised according to the additional information that has become available on IPV effectiveness, logistic implications, and on further progress towards polio eradication. WHO is encouraging operational studies and introduction projects to evaluate these issues.

Introduction of inactivated poliovirus vaccine into oral poliovirus vaccine-using countries (WHO position paper)

WER 2003, vol. 78, 28, pp 241-250
page 242

In 1988 a global eradication target (was set) by the World Health Assembly (to be accomplished by 2000). The polio eradication initiative developed the following four strategies: (i) achieving and maintaining high routine infant vaccination coverage with OPV; (ii) establishing surveillance for poliomyelitis and poliovirus through acute flaccid paralysis (AFP) notifications and laboratory investigation; (iii) conducting mass OPV campaigns (i.e. national immunization days or NIDs) to eliminate widespread circulation of wild poliovirus; and (iv) carrying out house-to-house OPV mop-up campaigns to interrupt any remaining chains of transmission.

Global Advisory Committee on Vaccine Safety, 34 December 2003

WER 2004, vol. 79, 3, pp 16-20
page 18

GACVS was informed of the (poliomyelitis eradication) programmes decision to stop oral polio vaccine use after certification of eradication in light of the adverse effects associated with its long-term use. It acknowledged that there are four critical elements of work for the period following the global interruption of polio transmission: finalizing the strategy for discontinuing oral polio vaccine after certification; providing country-level guidance on decisions regarding future use of inactivated polio vaccine; ensuring the necessary laboratory capacity for continued surveillance; and mainstreaming (integrating into routine services) the highly experienced and competent polio eradication infrastructure and personnel that have been developed for the programme.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 9-11 November 2005

WER 2006, vol. 81, 1, pp 2-11
page 4

(SAGE) noted that any switch to inactivated poliovirus vaccine brings potential new challenges with diphtheriatetanuspertussis and combination vaccines; and strongly supported immunization activities in countries currently or recently endemic for polio. These could be through high-coverage routine service, good supplementary immunization activities, or a combination of both, stressing that by whatever means all children need to be protected from polio.

Pregnant Women

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 1: Target diseases

WHO/IVB/04.06
page 20

WHO, UNICEF and UNFPA agreed to set the year 2005 as the target date for worldwide elimination of neonatal tetanus. This implies the reduction of neonatal tetanus incidence to below one case per 1000 live births per year in every district.
Because tetanus survives in the environment, eradication of the disease is not feasible and high levels of immunization have to continue even after the goal has been achieved.
To achieve the elimination goal, countries implement a series of strategies:
Improve the percentage of pregnant women immunized with vaccines containing tetanus toxoid.
Administer vaccines containing tetanus toxoid to all women of childbearing age in high-risk areas. This is usually implemented through a three round campaign approach.
Promote clean delivery and childcare practices.
Improve surveillance and reporting of neonatal tetanus cases.

Rabies

State of the art of new vaccines: research and development

WHO/IVB/06.01
page 89

Of importance for the supply of rabies vaccine is the use of the intradermal route schedule which reduces the number of vaccine vials and thereby the cost of PEP by up to 80% (US$ 5-10 for vaccine alone).

Rubella

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

Measles immunization provides an opportunity to reach children with other measures that improve overall child health, including:
_ supplemental vitamin A doses;
_ rubella immunization and surveillance activities.

Rubella vaccines (WHO position paper)

WER 2000, vol. 75, 20, pp 161-169
page 162

The primary purpose of rubella vaccination is to prevent the occurrence of congenital rubella infection including CRS.

Rubella vaccines (WHO position paper)

WER 2000, vol. 75, 20, pp 161-169
page 168

For countries wishing to prevent the occurrence of congenital rubella infection including CRS, 2 approaches are recommended: (a) prevention of CRS only, through immunization of adolescent girls and/or women of childbearing age; or (b) elimination of rubella as well as CRS through universal vaccination of infants, surveillance and assuring immunity in women of childbearing age. Decisions on which approach is taken should be based on the level of susceptibility in women of childbearing age, the burden of disease due to CRS, strength of the basic immunization programme as indicated by routine measles coverage, infrastructure and resources for child and adult immunization programmes, assurance of injection safety, and other disease priorities.

Rubella vaccines (WHO position paper)

WER 2000, vol. 75, 20, pp 161-169
page 169

Countries wishing to prevent CRS should immunize adolescent girls and/or women of childbearing age. The precise target population addressed will depend on susceptibility profile, cultural acceptability and operational feasibility. The most rapid impact would be achieved by mass campaigns for women of childbearing age (and men preferably). For increased impact even men should be vaccinated. Vaccination through routine services could ultimately achieve the same protection, but after a delay during which CRS cases will still occur.

SAGE - recommend to WHO

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 9-11 November 2005

WER 2006, vol. 81, 1, pp 2-11
page 5

SAGE suggested that the GIVS research agenda be expanded beyond clinical trials to include other areas of research, such as health systems research, acceptability and community preparedness studies, epidemiological studies and cost-effectiveness studies.

SAGE praised the overall GIVS costing model and encouraged its further refinement and completion by WHO. Specifically, it was noted that the costing of surveillance and monitoring and for advocacy and communication may have been underestimated.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 214

SAGE requested that the WHO position paper on mumps vaccines be revised, drawing on the conclusions and recommendations from the recent consultation on use of mumps vaccine in the Eastern Mediterranean Region. The revision should take into consideration the accumulating global experience that high coverage with 2 doses of measlesmumpsrubella vaccine (MMR) is required to effectively prevent mumps outbreaks.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 216

SAGE requested the updating of the WHO position paper on JE immunization.

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

WER 2006, vol. 81, 21, pp 210-220
page 219

SAGE considered that the GIVS goal of 90% (measles) mortality reduction by 2010 remained appropriate. SAGE recommended that work be undertaken to prepare for discussions on the feasibility of a global elimination goal.

Conclusions and recommendations from the meeting of the immunization Strategic Advisory Group of Experts (SAGE) - November 2006

WER 2006, vol. 82, 1, pp 1-16
page 7

One non-traditional approach to immunization financing is Advanced Market Commitments (AMCs.) The essence of the AMC mechanism is an agreement made by donors to guarantee a pre-set fixed price for a fixed market size (number of doses) that will be paid for a vaccine that meets a specific pre-established "target product profile"; this guarantee is made with the understanding that the recipient (developing) countries agree to make co-payments to purchase the vaccine.

Once the commitment is exhausted, manufacturers, having benefited from the subsidy, are contractually obliged either to continue to sell to developing countries at a price that the countries can accommodate over the long term or to license their technology to other manufacturers.

Three major roles were identified for WHO: (i) to provide recommendations on target product profiles through SAGE; (ii) to conduct the prequalification process for AMC-eligible products to be purchased through United Nations agencies; and (iii) to provide technical advice on evidence-based decision-making, priority setting, the introduction of new vaccines, and health-system financing to governments of AMC-eligible countries. SAGE recommends that WHO assumes these functions.

During discussion, it was recommended that the target product profile include elements aimed at reducing systems costs (especially related to the cold chain), such as specifying the presentation and vial size.

SAGE endorsed the role that is proposed for it - that is, to review WHOs proposals for the target product profile and to make a recommendation on the most appropriate profile.

SAGE recommends that the GAVI Alliances secretariat, the World Bank and the AMC independent advisory committee further refine and clarify the AMCs operating mechanisms so that potential obstacles to effective implementation are addressed.

SAGE recommends that more in-depth investigation should be done of the investments in immunization systems required to support the introduction of pneumococcal vaccine in AMC-eligible countries (which are also GAVI-eligible countries). SAGE also recommends that the impact of different copayment scenarios on the immunization financing profiles of AMC-eligible countries should be further modelled and investigated using more accurate estimates of future demands from countries.

Schedule

Yellow fever vaccine (WHO position paper)

YF (yellow fever) vaccine should be offered to all travellers to and from at-risk areas, unless they belong to the group of individuals for whom YF vaccination is contraindicated. There is currently insufficient scientific evidence to support a change in the International health regulations for travelers to endemic areas demanding proof of valid YF vaccination within the preceding ten years. However, in at-risk countries, vaccination resources should be directed to ensuring good primary vaccination coverage rather than to providing booster doses.

WER 2003, vol. 78, 40, pp 349-359
page 350

Yellow fever vaccine (WHO position paper)

Given the very rare, but potentially severe, adverse effects, YF (yellow fever) vaccine for travellers should be administered on strict indications only, particularly in the elderly. Restriction of YF vaccination to authorized centres is likely to promote the appropriate use of YF vaccine.

WER 2003, vol. 78, 40, pp 349-359
page 358

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

In conflict or emergency areas, WHO and UNICEF have a commitment to ensure that, at a minimum, measles vaccine and vitamin A supplements are administered. (WHO/UNICEF joint
statement: reducing measles mortality in emergencies, 2002.)

WHO/IVB/05.11
page 3

Tetanus

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 1: Target diseases

WHO, UNICEF and UNFPA agreed to set the year 2005 as the target date for worldwide elimination of neonatal tetanus. This implies the reduction of neonatal tetanus incidence to below one case per 1000 live births per year in every district.
Because tetanus survives in the environment, eradication of the disease is not feasible and high levels of immunization have to continue even after the goal has been achieved.
To achieve the elimination goal, countries implement a series of strategies:
Improve the percentage of pregnant women immunized with vaccines containing tetanus toxoid.
Administer vaccines containing tetanus toxoid to all women of childbearing age in high-risk areas. This is usually implemented through a three round campaign approach.
Promote clean delivery and childcare practices.
Improve surveillance and reporting of neonatal tetanus cases.

WHO/IVB/04.06
page 20

Conclusions and recommendations from the Strategic Advisory Group of Experts (SAGE) - 10-11 April 2006

There was agreement from SAGE members that WHO should broaden the goals of tetanus vaccination programmes from elimination of maternal and neonatal tetanus (MNT) to protection of all ages and sexes throughout life.

WER 2006, vol. 81, 21, pp 210-220
page 217

Tetanus vaccine (WHO position paper)

The goals of tetanus control are primarily (i) to eliminate MNT globally (<1 case per 1000 live births at the district level); and (ii) to achieve and sustain high coverage of 3 doses of DTP and of appropriate booster doses in order to prevent tetanus in all age groups.

WER 2006, vol. 81, 20, pp 198-208
page 199

Tetanus vaccine (WHO position paper)

All (tetanus vaccine) doses received over an individuals lifetime should be recorded on their lifelong vaccination card.

WER 2006, vol. 81, 20, pp 198-208
page 206

Travellers

Yellow fever vaccine (WHO position paper)

YF (yellow fever) vaccine should be offered to all travellers to and from at-risk areas, unless they belong to the group of individuals for whom YF vaccination is contraindicated. There is currently insufficient scientific evidence to support a change in the International health regulations for travelers to endemic areas demanding proof of valid YF vaccination within the preceding ten years. However, in at-risk countries, vaccination resources should be directed to ensuring good primary vaccination coverage rather than to providing booster doses.

WER 2003, vol. 78, 40, pp 349-359
page 350

Yellow fever vaccine (WHO position paper)

Given the very rare, but potentially severe, adverse effects, YF (yellow fever) vaccine for travellers should be administered on strict indications only, particularly in the elderly. Restriction of YF vaccination to authorized centres is likely to promote the appropriate use of YF vaccine.

WER 2003, vol. 78, 40, pp 349-359
page 358

Vaccine Administration

State of the art of new vaccines: research and development

Of importance for the supply of rabies vaccine is the use of the intradermal route schedule which reduces the number of vaccine vials and thereby the cost of PEP by up to 80% (US$ 5-10 for vaccine alone).

WHO/IVB/06.01
page 89

Vaccine Handling

Proper handling and reconstitution of vaccines avoids programme errors

V&B update 34
page 3

Vaccinators and store keepers should always:
_Include diluents in stock control and ensure adequate supplies.
_Check that the vaccines have been supplied with the right diluent. If any error is noted, the vaccine should not be used and the supervisor must be notified immeditely.
_Ensure the volume of diluent used is correct so that the proper number of doses per vial is obtained.

Vitamin A

Reducing measles mortality in emergencies (WHO/UNICEF Joint Statement)

WHO/V&B/04.03
page 3

Urgent, structured and coordinated supplementary immunization activities, together with vitamin A supplementation, are the most effective means of reducing measles mortality during and after complex emergencies. UNICEF and WHO will fully support national authorities and other partners to ensure that all children are immunized against measles.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 4

Strategies for achieving sustainable reduction of measles mortality:
Goal: Reduce the number of annual measles deaths by half by 2005.
1. Routine immunization: achieve >90% routine vaccination coverage (in each district and nationally) with at least one dose of measles vaccine administered at 9 months of age or shortly thereafter.
2. Second opportunity for measles vaccination: for all children through routine or supplemental activities.
3. Measles surveillance: establish effective surveillance for measles to report regularly the number, age and vaccination status of children contracting or dying from measles, to conduct outbreak investigations and to monitor immunization coverage.
4. Improve management of complicated cases: including vitamin A supplementation and adequate treatment of complications.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 4

Strategies for achieving and maintaining interruption of indigenous measles transmission
Goal: Achieve and maintain interruption of indigenous measles transmission in large geographical areas.
1. Routine immunization: achieve very high (i.e. > 95%) immunization coverage (in each district and nationally) with the first dose of measles vaccine administered through routine services.
2. Second opportunity for measles vaccination: to maintain the number of susceptible population below the critical threshold for herd immunity.
3. Measles surveillance: investigation and laboratory testing of all suspected measles cases (case-based surveillance). Isolation of measles virus should be attempted from all chains of transmission.
4. Improve management of complicated cases: including vitamin A supplementation and adequate treatment of complications.

WHO-UNICEF joint statement on strategies to reduce measles mortality worldwide

WHO/V&B/01.40
page 2

Measles immunization provides an opportunity to reach children with other measures that improve overall child health, including:
_ supplemental vitamin A doses;
_ rubella immunization and surveillance activities.

WHO/UNICEF joint statement - Global plan for reducing measles mortality 2006-2010

WHO/IVB/05.11
page 3

In conflict or emergency areas, WHO and UNICEF have a commitment to ensure that, at a minimum, measles vaccine and vitamin A supplements are administered. (WHO/UNICEF joint
statement: reducing measles mortality in emergencies, 2002.)

WHO-UNICEF guidelines for developing a comprehensive multi-year plan (cMYP)

WHO/IVB/05.20
page 6

(T)here are real benefits to combining immunization with three other interventions, namely vitamin A (VitA) supplementation, the distribution of insecticide-treated bednets for malaria prevention, and anthelminths.

The cost of integrating the national immunization programme (NIP) service delivery with other health programmes may be incremental to the NIP budget, as some costs might be included in other programme budgets. However, incremental costs such as transport of bednets may need to be included within the immunization budget if not covered elsewhere.

Yellow Fever

Immunization in practice: a practical resource guide for Health workers 2004 update_____Module 1: Target diseases

WHO/IVB/04.06
page 33

The main strategies to control yellow fever are based on a combination of immunization for protection against the disease and surveillance, and are outlined below.
Prevention:
administering yellow fever vaccine as part of routine infant immunization;*
preventing outbreaks in high-risk areas through mass campaigns;*
control of Aedus aegypti in urban centres.
* Both these strategies should ensure a minimum coverage of at least 80%.
Control
instituting a sensitive and reliable YF surveillance system including laboratory capacity to analyse samples and confirm suspected cases;
emergency response to outbreaks through mass campaigns.

Yellow fever vaccine (WHO position paper)

WER 2003, vol. 78, 40, pp 349-359
page 350

In countries at risk for YF (yellow fever), the use of the 17D vaccine is the main strategy recommended to rapidly build up YF immunity in the population at large. This prevention strategy has two components. The first component is the inclusion of the 17D vaccine in national childhood immunization programmes.

The second component is the implementation of mass preventive vaccination campaigns to protect susceptible older age groups. In the event of limited resources, assessment of the degree of risk can help prioritize areas for mass preventive campaigns.

Yellow fever vaccine (WHO position paper)

WER 2003, vol. 78, 40, pp 349-359
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Yellow fever vaccine (WHO position paper)

WER 2003, vol. 78, 40, pp 349-359
page 358

Given the very rare, but potentially severe, adverse effects, YF (yellow fever) vaccine for travellers should be administered on strict indications only, particularly in the elderly. Restriction of YF vaccination to authorized centres is likely to promote the appropriate use of YF vaccine.

Yellow fever vaccine (WHO position paper)

To avoid devastating outbreaks of YF (yellow fever) in the future, YF vaccine must be fully introduced into well functioning childhood vaccination programmes. In addition, childhood vaccination should be combined with pre-emptive YF vaccination campaigns in atrisk areas, and in urban areas control efforts directed against Ae. aegypti should be increased. In areas of predominantly jungle-type transmission, YF vaccination of persons belonging to the high-risk groups is strongly recommended.

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