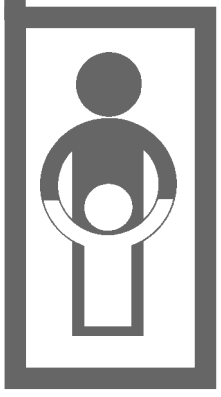
WHO/V&B/00.37
ORIGINAL: ENGLISH
DISTR.: GENERAL

Sustainable outreach services (SOS)

A strategy for reaching the unreached with immunization and other services



DEPARTMENT OF VACCINES AND BIOLOGICALS

World Health Organization
Geneva
2000

The Department of Vaccines and Biologicals
thanks the donors whose unspecified financial support
has made the production of this document possible.

This document was produced by the
Expanded Programme on Immunization Team
of the Department of Vaccines and Biologicals

Ordering code: WHO/V&B/00.37
Printed: February 2001

This document is available on the Internet at:
www.who.int/vaccines-documents/

Copies may be requested from:
World Health Organization
Department of Vaccines and Biologicals
CH-1211 Geneva 27, Switzerland
• *Fax:* + 41 22 791 4227 • *E-mail:* vaccines@who.int •

Contents

Glossary

BCG	bacille Calmette-Guérin (vaccine)
CCM	cold chain monitor (cards)
DEC	Di Ethyl Carbamazine
DTP	diphtheria–tetanus–pertussis vaccine
EPI	Expanded Programme on Immunization
IDA	iron deficiency anaemia
IDD	iodine deficiency disorders
IMCI	integrated management of childhood illness
ITN	insecticide-treated mosquito net
MCH	Mother and Child Health
MHDs	monthly health days
MOH	Ministry of Health
NIDs	national immunization days
ORS	oral rehydration salt
ORT	oral rehydration therapy
SNID	subnational immunization day
SOS	sustained outreach services
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
VAC	vitamin A capsule
VAD	vitamin A deficiency
VBV	Village Based Volunteers
VVMs	vaccine vial monitors
WPRO	WHO Regional Office for the Western Pacific
YF	yellow fever

1. Foreword

According to the United Nations Development Programme (UNDP) reports of 1998 and 1999, socioeconomic indicators point at an increasing disparity between rich and poor countries as well as between the people within the countries.[1]

Poverty is not merely measured by a decline in income. More importantly, it includes an absolute or relative degradation of the physical and socioeconomic infrastructure, of which the health services, subjected to reforms **required** by creditors, are part. Not surprisingly, therefore, health indicators report stagnating or deteriorating health conditions for large proportions of the population in many countries.

Increasing disparity between rich and poor, the resulting marginalization and lack of equity threaten to undermine economic, social and political structures on a large scale.

It is generally agreed that this process needs to be stopped and reversed.

Worsening health services affect people in densely populated areas as well as those living in remote areas with already difficult access. The first groups' lack of access is caused by socioeconomic and cultural factors, but remote populations simply lack the possibility to visit health facilities because of distance or other geographic barriers.

Remote populations are not the only ones without access to health services and not all remote populations are poor, but it goes without saying that remote people bear a disproportionate share of the burden.

It is within this context that WHO and the United Nations Children's Programme (UNICEF) have developed a new vaccine-delivery strategy with the aim of reaching remote populations without access to health services.

According to the principle of equity, every child has the right to basic health care, including protection against vaccine-preventable diseases. High-risk groups like remote populations deserve special attention to fulfil this goal.

[1] UNDP, *Rapport sur le dévelopement humain 1998* and *Human development report 1999*. See, in particular, pp. 32–38 and 52–60 in the former and 30, 36, 44, 95, 168 and 211 in the latter.

2. Reaching the "unreached"

2.1 Who are the unreached?

Extraordinary progress has already been achieved in bringing immunization services to African populations in the last twenty four years, since the inception of the Expanded Programme on Immunization (EPI).

Nevertheless, in 12 of the 51 countries of the continent less than half of the children under one year complete their schedule of immunizations and are fully protected against preventable childhood diseases. Large population groups receive no immunizations at all, or receive only the first immunizations of the series and remain partially protected. These populations, "unreached" by immunization services, fall into three distinct groups:

1) Populations living in peri-urban and other areas with usually good physical access to health services who shun contact with government services of all kinds, characteristically fail to register their child births, and make no contact with routine immunization services.

2) Rural populations who are nomadic or seasonally mobile, or simply live so far from the national infrastructure that they make no contact with routine immunization services. In some areas health infrastructure exists, but it is so skeletal, or due to its remoteness functions so poorly, that it is of no value in providing services to the surrounding population.

3) Populations in rural and urban areas with good access to services who succeed in partially immunizing their children but drop out of the series before the schedule is completed. On average, this group would raise immunization coverage by 20% if they completed the schedule correctly.

Although these groups are the main cause of low national levels of routine immunization coverage, they appear to participate well in national immunization days (NIDs) against poliomyelitis. Most countries with low routine immunization coverage have already achieved high levels of coverage with polio vaccine in successive NID rounds (see Table 1).

Where functioning fixed centres and outreach services exist, they should be managerially and materially strengthened. But where they do not exist or are not viable, other strategies should be sought to bring immunization to the people and to stimulate their demand for immunization. After two decades of infrastructure development for routine immunization services, health systems of African countries seem to have reached the limits of coverage possible through static health facilities.

Table 1: Comparison of Polio3 routine coverage and polio NID coverage

Country	1998 coverage with third polio dose in routine services	Highest coverage achieved during polio NIDs	% neonates without a single contact with routine EPI services
Angola	36	90	**32**
Cameroon	48	103	**37**
Chad	24	108	**57**
Congo	21 (1997)	91	**71**
Dem. Rep. of Congo	18	95	**75**
Kenya	64	82	**15**
Mauritania	28 (1997)	95	**31**
Niger	25	103	**58**
Nigeria	45 (1997)	95	**47**
Togo	35	104	**46**

2.2 Strategies for reaching the unreached

Plans to reach the unreached should be comprehensive, addressing all unreached segments of the population. The goal at the outset should be to define these segments according to the best strategies for reaching the whole population equitably.

Where the strategy makes prime use of the existing infrastructure of fixed and outreach services, it will be concerned with immunization within the context of decentralization and integration – the twin pillars of health sector reform. Where the existing infrastructure is non-existent or hopelessly inadequate, the strategy should be concerned with the periodic provision of immunization and a "basket" of the health and other services that the population most wants and needs to be effectively served.

The overall principle of this approach, whether it involves the improvement of the existing infrastructure or it entails new strategies, is that the community is involved in the design as well as the execution of the plan.

3. Sustained outreach services (SOS)

SOS is a strategy for reaching those segments of the unreached population that are too physically remote to be effectively reached by the present infrastructure of immunization services (the second group mentioned in paragraph 2.1). Strategies aimed at improving immunization coverage among the physically accessible but unreached populations (slums, etc.) or decreasing drop-out rates are equally important, but would more rely on managerial improvements than on operational innovations. SOS proposes to serve this unreached population through periodic activities in which vaccines and other medical as well as non-medical services may be delivered. The rationale for this approach is that polio NIDs have demonstrated that campaigns can:

- Reach an important proportion of the population.
- Mobilize resources through partnerships.
- Obtain a high level of political support.
- Succeed in mobilizing the community.
- Provide high visibility to the health sector.

The strategy is innovative in that it represents a radical rethinking of the traditional EPI approach in terms of :

- The interval between immunization contacts.
- Simplification of the usual cold chain strategy.
- Exploitation of new technologies (such as auto-disable syringes, prefilled single dose auto-disable syringes, and vaccine vial monitors).
- The target age groups; and (possibly of greatest importance).
- The choice of interventions delivered in addition to immunization.

SOS is not to be confused with "catch-up" campaigns, which attempt to raise coverage with a one-time intervention. SOS should become a structural component of routine immunization services in those areas for as long as it is needed. Annual campaign "rounds" of short duration can be highly effective in reaching populations at an affordable local cost. Both the frequency of these rounds and the basket of services to be provided remain flexible in the concept of SOS and are chosen locally, according to the local situation.

Most countries with large unreached populations that may wish to implement the SOS strategy will require substantial external assistance at first. However, to ensure the sustainability of SOS, it should be gradually integrated into government's budgets. The terms of the partnership for SOS should therefore be set from the start.

Finally, the impact of SOS should be judged, not solely by immunization coverage and disease reduction, but also by qualitative indicators that reveal the development impact of the strategy and the quality of the services that have been provided. The indicators for monitoring and evaluation should also be set by the partnership during the initial planning for SOS.

3.1 Selecting the services

Immunization and vitamin A supplementation comprise the "minimum" package of the SOS. Other services to be included in the SOS are chosen according to the needs expressed by the population and the feasibility of implementation, considering financial and operational constraints. The services may include:[2]

- Micro nutrient supplementation.
- Malaria control.
- Simple curative services.
- Safe delivery kit and traditional birth attendant training.
- Anti-parasitic treatments – Metronidazole.
- Cattle immunization.
- Agricultural counselling.
- Legal counselling.
- Education: family planning, sanitation, etc.
- Vector control.
- Sanitation (well decontamination, latrine construction, etc.).

The criteria for selecting services include:

- Real need and perceived as such by the population.
- Effectiveness.
  - immediate impact;
  - simple one-time intervention;
  - not requiring any follow-up;
  - not demanding high level of specialization.
- Feasibility:
  - financial, human and material resources required;
  - number of staff and weight and volume of materials in relation to accessibility and means of transport.

[2] See the annexes for fact sheets on the different interventions.

3.2 Immunization and vitamin A supplementation

The immunization package need not necessarily be the EPI standard for routine services, but should be based on epidemiological, financial and operational criteria in the areas to be served. Choice of SOS package and delivery strategy is interrelated. The following factors should be considered for the elaboration of a final strategy:

- Which vaccines to include?
- Age-group chosen for the intervention.
- Effectiveness – protection afforded against disease.
- Injection safety.
- Cold chain: required, available, weight, volume, autonomy, etc.
- Accessibility – need for transport and communications.
- Staff training.
- Community participation.
- Cost per round, per immunized child and/or per disease case prevented.

The following paragraphs will deal with the selection of immunization services only. The basket of other interventions will be discussed in chapter 4.

3.2.1 Which vaccines to include?

The following prioritization for inclusion of vaccines to SOS is recommended:

Priority	Vaccine	Rationale
1*	Measles	High disease burden, single-dose impact
1	Yellow fever in risk areas	High disease burden, single-dose impact
1	Oral polio	Polio eradication initiative
1	Vitamin A	Combats vitamin A deficiency
2	Tetanus toxoid	Low single-dose impact
3	DTP	Low single-dose impact
3	Hepatitis B	Relatively high price, low single-dose impact

* Priority 1 is recommended as the "minimum" SOS package for one round per year

BCG should not be used in SOS strategies, because:

- It contributes insignificantly to disease control.
- Its main area of protection is against cerebral TB if given shortly after birth.
- Its intra-dermal administration requires special skills and experience.

Measles is the most complex vaccine to administer in the first priority group of vaccines because it requires reconstitution, it requires ice at the point of administration and it must be used within six hours.

The final decision on which vaccines to include must be made locally.

3.2.1.1 Age group

The target age group for immunization is chosen on the basis of epidemiology and immunization history. Disease incidence in a population with low vaccination coverage is highest among children under five, with peaks between 12 and 36 months. Therefore the targeted age group should initially be determined by the epidemiology of the disease in that specific region and gradually come down to the under one age group, depending on the success of the strategy.

Table 2. Age specific disease incidence for measles, pertussis and poliomyelitis

a) Median age of measles prior to immunization		b) Median age of whooping cough		c) Poliomyelitis by age					
	Median age in years		Median age in months		Cumulative percentage of cases before the age of:				
					12	24	36	48	60
Urban Africa	1.5 – 2.5	West Africa	24.4	Ghana	22	64	79	91	96
Rural Africa	2.5 – 5	East Africa	35.1	Malawi	15	64	83	90	94
		Congo and South Africa	23.6	India	49	64	74	88	90

Table 3. Suggested age groups for vaccination by population type with SOS

Target population	Nomadic population or any population at high epidemic risk.	Urban and rural populations.	All populations Medium coverage	All populations High coverage
Coverage	<30%	30–50%	50-70%	>70%
Number of rounds feasible per year	1–3	1–3	2	3
Measles / YF	<15	<5	<2	<1
TT	Women 15–45	Women 15–45	Women 15–45	Women 15–45
Polio	<5	<5	<2	<1
DTP	<5	<5	<2	<1
Vitamin A	Children 6–59 months	Children 6–59 months	Children 6–59 months	Children 6–59 months

3.2.1.2 Effectiveness

The impact of immunization on disease is dependent on the timing and number of doses received. The EPI immunization schedule is epidemiologically optimized for developing countries but it cannot be followed under SOS strategies because they provide periodic, rather than continuous, access to services. Protection under SOS is therefore lower than that provided by fixed services but it is still important (see Table 4).

Table 4. Protection of unimmunized children/women after 1, 2 or 3 rounds in one year

Vaccine	1 round	2 rounds	3 rounds	Remarks
Measles protection	>85%	-	-	1 dose gives lifelong
Yellow fever	>90%	-	-	1 dose gives at least 10 years protection
Polio		76–100%	87–100%	Every opportunity should be used for an additional dose for polio eradication
DTP	little	80–100% short term	80–100% long term	
TT/Td	little	3 years	10 years	
Vitamin A		100%		

The minimum interval for all antigens is one months and four months for vitamin A.

3.2.1.3 Injection safety

Injectable vaccines must be administered safely. To ensure safety, the following factors should be considered in designing SOS strategies:

- Qualified staff for injection and vaccine reconstitution;
- Provision and transport of auto-disable syringes and safety boxes;
- Facilities for burning the syringes after use, at the point of use;
- Reconstituted vaccines have to be discarded after 6 hours.

3.2.1.4 Accessibility

Accessibility is better during the dry season, but nomadic populations especially will be moving between water points and are therefore difficult to find. Accessibility as well as mobility decreases during the wet season. These two factors must be weighed against each other.

When choosing the type of transport, the following factors should be considered (see Table 5):

- Who will provide the transport?
- Number of persons to be transported.
- Loading capacity in kg and m^3, with and without passengers.
- Distance (total per day and between fuel supply points).
- Type of services delivered.

Table 5. Example of type of information on different means of transport used in planning SOS strategies

	Toyota Landcruiser HZJ75			Motor cycle Yamaha AG100			Bicycle		
Range with full tank	**700 km with 1 tank of 90 l**			**400 km**			**Na**		
Loading capacity (give all options: with x persons, you can load y kg and z m^3)	No. of persons 6 3	Weight 500 kg 700 kg	Volume 1.8 m^3 3.2 m^3	No. of persons 1	Weight 20 kg	Volume 0.07 m^3	No. of persons 1	Weight 10 kg	Volume 0.02
Garage	city A			city C			Privately owned		
Maintenance	city B			city C					

3.2.1.5 Cold chain

The "traditional" cold chain for routine immunization consists of a set of rules without differentiation per type of vaccine, except for the recommended storage temperatures. However, in campaign settings a certain flexibility is possible and may make the difference between immunizing or not. The cold chain is maintained for vaccines in SOS for as long as possible.

However oral polio vaccine vials have, for several years, been fitted with vaccine vial monitors (VVMs), which enable them to be used beyond the reach of the cold chain.[3] In this case, polio vaccine is protected from extreme heat by cold boxes or by other local means, such as evaporative cooling (wet cloth or earthenware vessels or gourds, etc.) and by burying or submerging in water. Experience in a number of countries has shown that, with the VVM, polio campaigns can be conducted with a minimum of cold chain requirements, provided the staff is properly trained. Apart from making the campaign cheaper, the active use of VVMs allows teams to travel further – because of less weight – and longer, thereby reaching children that would not have been immunized without this strategy.

Other vaccines, much more heat stable than polio (see Table 6), will have the VVM from 2001. This will allow for a more flexible and effective cold chain, in particular for outreach services. However, freeze-dried vaccines (measles, BCG, yellow fever) will continue to need ice to keep the vaccine cool after reconstitution.

[3] *Making use of Vaccine Vial Monitors. Flexible vaccine management for polio supplementary immunization activities* (WHO/V&B/00.14).

Table 6. Vaccines by heat stability group

Stability group	Vaccine (s)	Days @ +25°C	Days @ +37°C
Least stable	Oral polio	7	2
Moderately stable	Pertussis	30	7
Stable	Yellow fever, BCG, measles	60	14
Highly stable	Toxoids, HB	180	60 (Instantaneous damage @ 45-50°C)

The cold chain monitor (CCM) cards may be used to monitor vaccine status in the SOS if they have been kept with the vaccine throughout the distribution process. CCMs will indicate whether or not to use vaccine after the cold chain has failed, or when it is no longer cool.

3.2.2 Staff training

The success of SOS largely depends on the quality of the application of operational tools in specific situations and therefore on the degree the health worker can identify himself with the strategy. Training should be based on that.

The final strategy should result from the combination of the externally provided operational tools together with the knowledge the trainee already has of the specific situation.

Rather than general rules and global recommendations to be applied everywhere, the trainer should provide tools for problem solving, leading to a tailor-made strategy that reflects minimum standards and equipment specifications as much as local operational constraints.

3.2.3 Focal points

Other programmes (i.e. Guinea worm eradication) have been successful in bringing health services to remote populations with the help of focal points within the community, chosen by them. The role of these focal points would be to:

- Serve as a contact point between the teams and the community to ensure timely and adequate communication and information on visiting schedules.
- Facilitate the arrival of the team.
- Be an intermediate between the teams and the community.
- Express the community's needs.
- Ensure any required follow-up after the team's departure.
- Gradually increase its competence as a result of basic training by the teams, allowing for an extension of the services delivered as well as for building up capacity.

3.2.4 Community involvement

For SOS to be successful, whatever strategy is chosen, community involvement is indispensable:

- To express the specific needs of the region.
- To provide support infrastructure for visiting teams.
- To maintain activities between visits.
- To keep up political pressure for appropriate services.

Initially the services can be proposed and offered to the community, but the services should be of sufficiently high quality to raise demand within the same community as well as in neighbouring areas. This is particularly critical for nomadic populations whose movements and collecting points should determine the SOS strategy for reaching these populations.

For its sustainability it is vital that implementing and maintaining SOS becomes a political issue for community leaders.

3.3 Deciding the strategy

There are three predominant strategies for reaching large, remote populations on a periodic basis:

- The NID strategy: teams are temporarily constituted, supplies are distributed and transport is provided for a single day, or series of days, during which the entire national target population is visited and services are provided.
- The "Grandes Endémies" approach of the 1960s: teams are permanently constituted, provided with transport and make extended "circuits" during which, over a period of 4, 6 or 12 months, the entire national target population is visited and services are provided. If more than one visit is made to the population each year, then the circuits are repeated.
- The recurring subnational immunization day (SNID) strategy: teams are temporarily constituted in a single region or district for a day, or a series of days, during which the entire regional or district target population is visited and services are provided.

These three "variations on the campaign theme" all require micro planning and each has comparative advantages and disadvantages which are shown in Table 7.

Table 7. Comparative advantages and disadvantages of three strategies

"National immunization days"	
Advantages	**Disadvantages**
• Resources mobilized temporarily from other sectors – less costly to MOH • Volunteers available on temporary basis (not for injectable vaccine) • National mobilization, so political visibility and support of leadership	• "Fatigue" after several repeated rounds, particularly multi-rounds per year • Vulnerable to changes in political preferences or personalities • Temporary disruption of **all** health staff • Centralized, national approach usually requires external resources, repeatedly
"Grandes endémies" circuits	
Advantages	**Disadvantages**
• Permanent service infrastructure is integrated within the health system • Extra resources needed to reach remote populations are budgeted and provided centrally – better sustainability • Expertise of teams is assured by their specialization, and experience	• Danger that these services to be seen as "replacing" fixed services in the region. No involvement, or "buy-in" from other health staff in the region • Requires permanent bases, or "launch-points" which are secure and fully equipped with maintenance facilities • Costly – all costs borne by MOH.
Recurring "subnational immunization" days	
Advantages	**Disadvantages**
• Resources mobilized temporarily from other sectors – less costly to MOH • Volunteers available on temporary basis (not for injectable vaccine) • Regional mobilization, so political visibility and support of local leadership • Permits certain staff and supervisors to 'rotate' from one local campaign to another	• "Fatigue" after several repeated rounds, particularly multi-rounds per year • Vulnerable to changes in local political preferences or personalities • Temporary disruption of local health staff

3.3.1 SOS logistic support "hubs"

For the "Grandes Endémies" strategy, logistics support, in terms of transport, equipment and supplies, must be provided to the teams who make the visits, one, two or three times per year to remote populations. The logistics base of these teams, or the "hubs" of SOS, will have to be equipped for transport and equipment maintenance and for supplies storage. SOS Hubs may be established at district or regional health offices or at strategic points, such as rural hospitals where there is electricity for the cold chain, secure storage and transport maintenance facilities, and reliable telecommunications.

Transport is particularly critical for SOS, which seeks to bring services to the most remote populations. The choice of modes of transport, whether four wheel drive, or motorcycle, bicycle or animal will require carefully planned maintenance management to avoid interruptions in availability.

3.3.2 Deciding the number of rounds per year

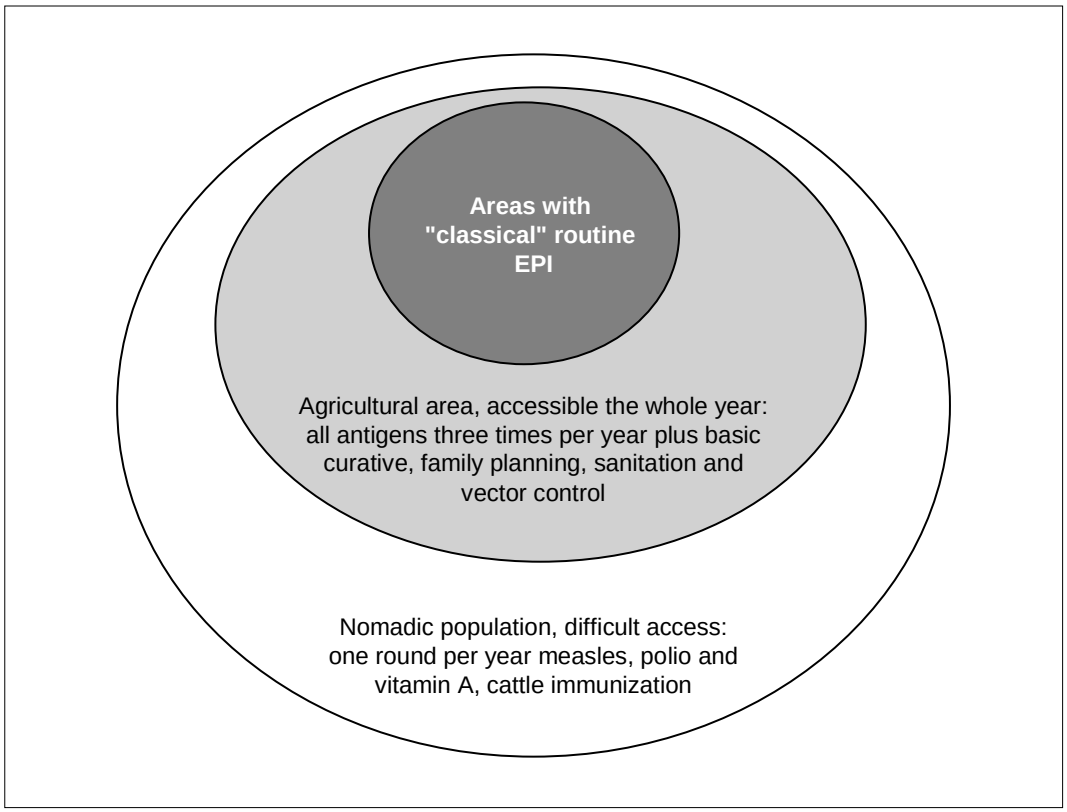
The number of rounds per year can be decided on the basis of the above-mentioned factors and constraints. Strengths and weaknesses of the options are summarized in Table 8.

Table 8. Strengths and weaknesses of different frequencies of SOS

3 Rounds per year	
For:	**Against:**
• Children fully immunized after one year	• Campaign fatigue at all levels, both for planners and implementers
• Lowest costs per fully immunized child	• Highest costs per year
• More opportunities to offer other services	
2 Rounds per year	
For:	**Against:**
• Sufficient protection	• For complete immunization, children under two years must be reached
• Lower total costs per year	• No full protection after one year
• Less risk of campaign fatigue	
1 Round per year	
For:	**Against:**
• Effective in very difficult areas: only measles, YF, polio and vitamin A	• Cohort 0-2 not, or insufficiently protected (DTP and hepatitis B)
• Lowest costs per year and per child for above mentioned antigens	• For complete immunization with all antigens the target group must be under three years old

The final strategy may be flexible in a number of aspects: number of antigens, number of rounds and type of additional services. Different strategies may be combined in a given region (see Figure 1).

Figure 1: Example of SOS in a region



3.4 SOS-like experiences

A number of countries have already implemented programmes with characteristics similar to SOS. In all of them the programmes were born from a concern on how to reach populations deprived of basic health care.

Multiple service delivery in Cambodia

In Cambodia, 95% of the population is living in central urban and rural areas, mainly on rice agriculture. Rice fields cover roughly 40% of Cambodia's landmass. Only 5% of the population live spread out over the remaining 60% of the surface area, covered with forests and/or hills.

Schematically, Cambodia can thus be divided into two strata: a) a non-malaria transmission area with a population density of 132/km^2 (9.5 million on 72 000 km^2); and b) a malaria transmission area with an average population density of five inhabitants/km^2 (0.5 million on 108 000 km^2).

Over 2/3 of the scarce forest population are subdivided into a dozen different ethnic minority language groups, while the remainder of the total population is ethnic Khmer. The ethnic minority groups are culturally isolated, semi-nomadic, living on subsistence agriculture, hunting and gathering forest products. In money terms, they are the poorest section of Cambodian society.

During Cambodia's rich economic development period of 1955–1970, the public health system thrived within the high population density areas and eventually reached higher standards than that of neighbouring Thailand.

Almost 30 years of war and civil war followed. Notably, after the genocide aiming at "intellectuals" such as medical personnel, there is the urgent necessity to rebuild the curative health services all over the country. In this context, the establishment of health posts in remote forest areas has become secondary. It is especially difficult now that very low Government salaries require health staff to unofficially charge patients for treatment, which is not realistic in minority areas due to barter economy.

Still, attempts are being made – by nongovernmental organizations (NGOs) – to set up and maintain health posts using minority staff, despite all odds. The process is lengthy and costly (very labour intensive). Since 1996, the National Malaria Programme has carried out systematic distribution of mosquito nets to forest villages. After four years of expansion, the programme now reaches about 80% of the target population in over 1000 remote villages within 12 forested provinces. The success of this large-scale outreach activity was made possible through the establishment of a network of 15 NGOs that provide the logistic support to the provincial health services that are executing the activities.

As outreach is the common problem for all disease control programmes, spontaneous combinations of activities during the mosquito net distribution occurred, almost instantaneously ("Can you give me a ride?"). At the moment, the combined outreach activities centred around bed nets include: a) the malaria treatment of fever cases (with Mefloquine); occasionally b) differential diagnosis of all fevers and treatment; c) distributions of Mebendazol 500 mg de-worming tablets (lowering infestation with hookworm and Ascaris under clinically relevant levels); d) vitamin A distributions; e) screening for leprosy; and f) routine EPI. During four years of implementation, the programme could demonstrate a good impact on health and on the quality of life among the villagers.

The mosquito bed nets have thus become, due to their popularity with the target group, a platform for many health messages and services. It is important to realize that the Cambodian outreach phenomenon was initially not intended as a revival of the mobile teams, but unintentionally, due to the necessities and opportunities of the field, began to very much resemble what had been developed decades earlier in French-speaking West Africa, from the nucleus of mobile sleeping sickness control campaigns. The basic principle, which is still valid, can be summarized as "where there is not fixed health system, it has to be mobile".

Multiple service delivery in Cambodia (continued)

The Cambodian Ministry of Health and WPRO officially endorsed this approach and it is seen as a substantial strengthening of the health system. The outreach activities are to be progressively taken over by the health centres of new Operational Districts and integrated into the "Minimum Package of Activities" as part of the ongoing health system reform.

It is equally important to strengthen the fixed base, curative public health system wherever possible. As such, RBM Cambodia is raising funds to establish new health posts in forested areas. Consequently, the combined outreach activities are only one of the answers to one very specific problem setting, which has to be complemented with a set of specific other solutions for other specific risk groups. There is no single recipe, except using opportunistically (and unashamedly) every method that works, no matter how trendy or outdated. Combined outreach activities or SOS are right for areas of low population density within poor countries.

Outreach services – Mozambique 1999–2001

Since the peace accord in 1992, the Health Sector in Mozambique has demonstrated steady improvements in the delivery of health services. There has been increased expenditure on health and a high percentage of aid provided for health services. However, improvements in the delivery of health services have not made a significant impact on child health.

In Mozambique, children still face major problems of access to quality health care. The infant mortality rate remains 146/1000 live births, with one out of two children being immunized and communities remaining inactive in the development.

Data from the 1997 national census showed that 71% of the population lives in rural areas, that the average distance of the population from a primary health centre is 20km and that just over 50% of the health facility network is equipped to provide vaccination services routinely.

The Ministry of Health (MOH) initiated the National Integrated Plan for Maternal and Child Health. The EPI five-year plan was developed with the aim of extending fixed posts to provide outreach services through "satellite posts" involving a package of services and initiating community participation through monthly health days (MHDs). Monthly health days provided the bridge between outreach services and facilitation of the community's use of health services. Common activities implemented during monthly health days include assessing community health problems, deciding on a preventive action for health (EPI, family planning, antenatal care, vitamin A), sanitation and water activities, education (integrated management of childhood illness – IMCI), treatment and evaluation actions for health.

Some of the obstacles to the programme were lack of human resources for facilitation and implementation, transport, difficulties in achieving the necessary scale and community demands often out of the health area. Mozambique requires UNICEF support in the development and implementation of district plans for outreach activities, community capacity development, extension of vaccination services through fixed posts, implementation of MHDs and decentralized and focused campaigns.

In conclusion, the MOH has defined clear objectives for the extension of MCH services through outreach activities and MHDs. The integration of health programmes and decentralization of services is a challenge for a more coordinated support.

Reaching the unreached – experience of Chad

Chad is a landlocked country with a population of approximately 7.5 million people, 80% of whom live in rural areas.

In early 1990, Chad started a democratic process and tried to build a health system based on a health policy that focused on primary health care, district and community participation and cost recovery. Despite the efforts made by the present government, the situation of women and children remains poor. Chad owes its high infant and maternal mortality rate of 194/1000 and 827/100 000 live births respectively to increased poverty and illiteracy rates but mainly due to a lack of basic health services with low accessibility to health facilities.

The Government launched a revitalization programme/Bamako Initiative that operated in 10 of the 55 districts. The project is mainly supported by UNICEF and the World Bank. Its objective is to reduce mortality rates for infants and children. Despite the efforts by the health team and the availability of funds, the indicators improve, but remain low. For instance between 1995 and 1997, EPI coverage had smoothly increased from 8% to 30%. Similar results were found with other child health indicators including ORT use and antenatal care.

An in-depth analysis was conducted and showed that the results were due to poor contact between the community and the health centre, poor accessibility and lack of human resources at the health facility and community level. In this context, it was decided to review the strategy used and to add a mobile strategy. This strategy based on provision of a basic health package including EPI services, vitamin A, ORS, malaria, TB, growth monitoring, well treatment and health education was designed to reach all communities located more than 20 km from a health centre and to complement the fixed strategy. The mobile team was based at the district level and allowed to reach villages once a month during the dry season.

The contribution of these different strategies resulted in an increase in the indicators. For instance, DTP had increased from 30% in 1997 to more than 50% in 1999. Diseases associated with EPI also decreased as well as the severe cases of measles and diarrhoeal disease.

The cost of these strategies, (fixed, outreach and mobile) is less than $0.50 per year per inhabitant. According to achievements of the project in the intervention zone, the government and other parties decided to establish the mobile strategy as a component of the revitalization process, to use the lessons learned on how to reach the unreached and to reorient the current projects that show poor achievement.

Chad planned and concluded a national child health week in May 1999. This process acquired a national mass campaign in order to strengthen some of the child health indicators including vitamin A use, ORS use, use of impregnated bed nets and exclusive breast feeding. The mass campaign was conducted during the African day for children, which represented the high risk period for malaria and diarrhoeal diseases. During this campaign a second annual dose of vitamin A was provided to 55% of the target population.

3.5 Evaluating SOS

The whole purpose of SOS is to apply lessons learned from polio eradication and other initiatives to increase access to children currently physically beyond the reach of the routine programme. Thus the priority in evaluating SOS will initially be through the use of process indicators, with a particular emphasis on the proportion of unreached that have been made accessible, the number of interventions, costs, partnerships, community participation, etc.

Evaluation must necessarily be simple in the case of difficult-to-access populations and should require relatively low-level skills of health staff. Evaluation standards can evolve with the increase of accessibility and of the available skills.

For each intervention, a gliding scale should be defined from the minimum to the maximum information required for its evaluation (see the fact sheets in the annex). A minimum evaluation could be the number of interventions given out (bed nets, doses, etc.) whereas the maximum evaluation would measure the impact on specific and overall mortality. The latter presupposes the existence of reliable baseline data on the basis of which the impact can be measured.

3.6 Financing and implementing SOS

Reaching physically remote populations is very costly. Some cost studies have shown a factor of five between the cost per fully immunized child in high density, urban populations and remote, low-density populations. In difficult topography, where there are no roads and no telephones the cost is highest. Yet, the largest unreached populations requiring a SOS strategy are in the poorest countries.

It is clear, therefore, that governments will require considerable additional resources to launch and to sustain SOS in the long term. The following principles are prerequisites for starting SOS in a country: partnership, moving towards self-sufficiency and cost-effectiveness.

3.6.1 Partnership

Additional resources, human or financial, imply that a government planning SOS will need to enter into a partnership with external agencies and the internal private sector, NGOs and other governmental departments. Involvement of other ministries is therefore crucial from the start of the project.

This partnership should use the existing mechanism of the Interagency Coordinating Committee.

Partnership should be:

- **Contractual**: the contributions of the partners and their respective roles should be clearly defined from the outset. The "contractual" role of the government should not only include their support to the SOS strategy but also require additional efforts to reach the unreached in other segments of the unreached population, which may not require this level of external support.
- **Long term**: partners should be willing to commit themselves in the long term, rather than merely in the short term. SOS is not a project but an indefinite strategy for achieving health and a better quality of life for remote populations.

3.6.2 Moving towards self sufficiency

Over the medium to long term, governments should expect to progressively take over a greater and greater share of the cost of SOS, starting at the outset with at least a small percentage. The target for this share of the total cost might be adopted from the Vaccine Independence Initiative.

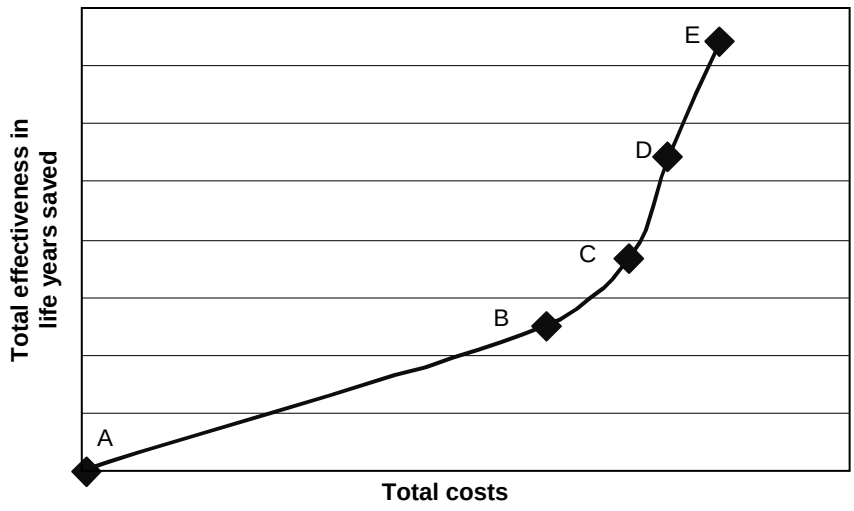
Not only the government, but also the community should 'buy in' to SOS by providing local revenue to offset certain elements of the cost of SOS. Opportunities for cost recovery will vary widely from country to country and may not exist at all in some countries. But it is a principle of the concept of SOS that sustainability depends on the motivation of the population to give, as well as to receive.

3.6.3 Cost-effectiveness of SOS

The cost-effectiveness of SOS can be assessed in two ways. First, the overall cost-effectiveness of the services in comparison to other health interventions is an important tool for supporting financial sustainability and is essential when determining the priority of SOS compared to other health interventions. Overall cost-effectiveness will vary from setting to setting and is determined by the costs of delivering the services, on the one hand, and on how much disease burden is reduced, on the other hand. Costs as well as effects in terms of reduction in disease incidence must thus be closely monitored to determine the cost-effectiveness. However, as reliable epidemiological surveillance systems are difficult to establish in the areas in question, it is likely to be difficult to monitor the impact on the health of the target population. As mentioned above, this evaluation system will be established gradually. The costs of SOS can be more easily examined. Annex 2 outlines a standard framework for monitoring annual costs of SOS.

The second approach to cost-effectiveness is related to the change in cost-effectiveness from introducing additional interventions to SOS. By treating immunization services as the "basis" of SOS, the incremental costs of additional interventions are likely to be relatively low. Immunization services demand a relatively high initial capital investment in terms of transport and cold chain equipment, but when this is established, it will be relatively cheap to add additional interventions, such as vitamin A supplementation and malaria treatment. This principle is illustrated in Figure 2 below.

Figure 2. SOS cost-effectiveness



Option A: Do nothing

Option B: Immunization services

Option C: Immunization services plus vitamin A supplementation

Option D: Immunization services plus vitamin A supplementation and malaria bednets

Option E: Immunization services plus vitamin A supplementation, malaria bednets and malaria treatment

The figure illustrates total costs and effects (in terms of life years saved) for four different SOS strategies as well as the "do nothing" option, which does not cost anything, but does not save any lives either. Costs as well as effects increase when an additional intervention is included. However, it is seen that the relative increase in costs compared to the outcome is less for option C, D and E compared to option A. The decrease in the slope of the graph illustrates that the incremental cost-effectiveness ratio improves with additional interventions, indicating that relatively more extra outcome is gained from the same additional costs. Clearly, if a decision is taken to provide unreached populations with health services, a combination of interventions is more cost-effective than the provision of separate services.

3.7 Target countries for SOS

Because the content and strategy of SOS will vary widely from country to country, it is evident that no one-model or one-country trial will suffice in convincing other countries to launch SOS themselves.

Criteria for targeting initial countries for SOS should include:

- Large, remote populations unreached by immunization services as expressed by low DTP1 coverage (<50%).
- National coverage of polio3 under 50%.
- High national dropout rates from DTP1 to measles.
- Countries of unrest or war.

4. Criteria for choosing and combining SOS services

The practical possibility of combining interventions during a single visit will largely depend on a number of factors:

- Operational constraints to delivering the intervention: weight and volume of the required means in relation to the transport capacity.
- The number of doses/treatments per intervention required to be effective compared with the frequency of the visits.
- The required training level of health staff.
- Necessity for and requirements of follow up.
- Complexity of administration.
- Risk in case of non-compliance, etc.

To know if interventions should be combined, three issues need to be clarified:

1) Should the intervention take place?
2) What is the effectiveness of the intervention in a setting of periodic contacts?
3) How do the operational constraints of each intervention affect specific objectives (eradication) in case of combination?

The interventions need prioritization, assessment of effectiveness in relation to a particular delivery strategy and assessment of elements relative to their combination.

The questions asked in Table 9 below go into depth with details of an operational nature. The success of the combination of interventions depends to a large extent on the very practical details of their implementation. If these details are ignored, the risk is that what seemed to be a great idea, may finally be harmful to all interventions involved.

How to use the form

The form consists of three blocs:

- The first bloc allows prioritizing the intervention.
- The second bloc provides elements for the determination of the effectiveness of the intervention in a campaign setting.
- In the third bloc the feasibility of combining interventions is analysed.

The questions in the blocs should be answered by encircling the correct answer in the cells behind it.

The cells are in columns with headings that can be ignored at this stage: they are meant for the interpretation of the bloc as a whole and not for each single question. The interpretation is given below the table.

4.1 Questions

See Table 9 below.

Bloc I Criteria for decision-making related to prioritization

- The intervention should take place if:
  - questions 1 or 2 are answered in the 'Yes' column (a positive answer to either of these questions overrules all other considerations regarding whether or not the intervention should take place) or
  - questions 3 or 4 are answered in the 'Yes' column.
- The intervention should be considered if any of the answers of questions 3 to 5 are in the 'To be considered' column.

Bloc II Criteria for decision-making on effectiveness in a setting of periodic contacts.

- The intervention can take place in a setting of periodic contacts if all answers to the questions in this bloc are encircled in the 'Yes' column.
- Using a setting of periodic contacts should be considered carefully if any of the answers to the questions is encircled in the 'Reconsider' column.
- The intervention should not be administered in a setting of periodic contacts if any of the answers in the 'No' column is encircled.

Bloc III Criteria for decision-making on combining different interventions.

- Interventions can be combined if all answers to the questions in this bloc are encircled in the 'Yes' column.
- Combination should be carefully reconsidered if any of the answers to the questions is encircled in the 'Reconsider' column.
- Combination should not take place if any of the answers in the 'No' column is encircled.

Table 9: Questionnaire for assisting decision-making on interventions

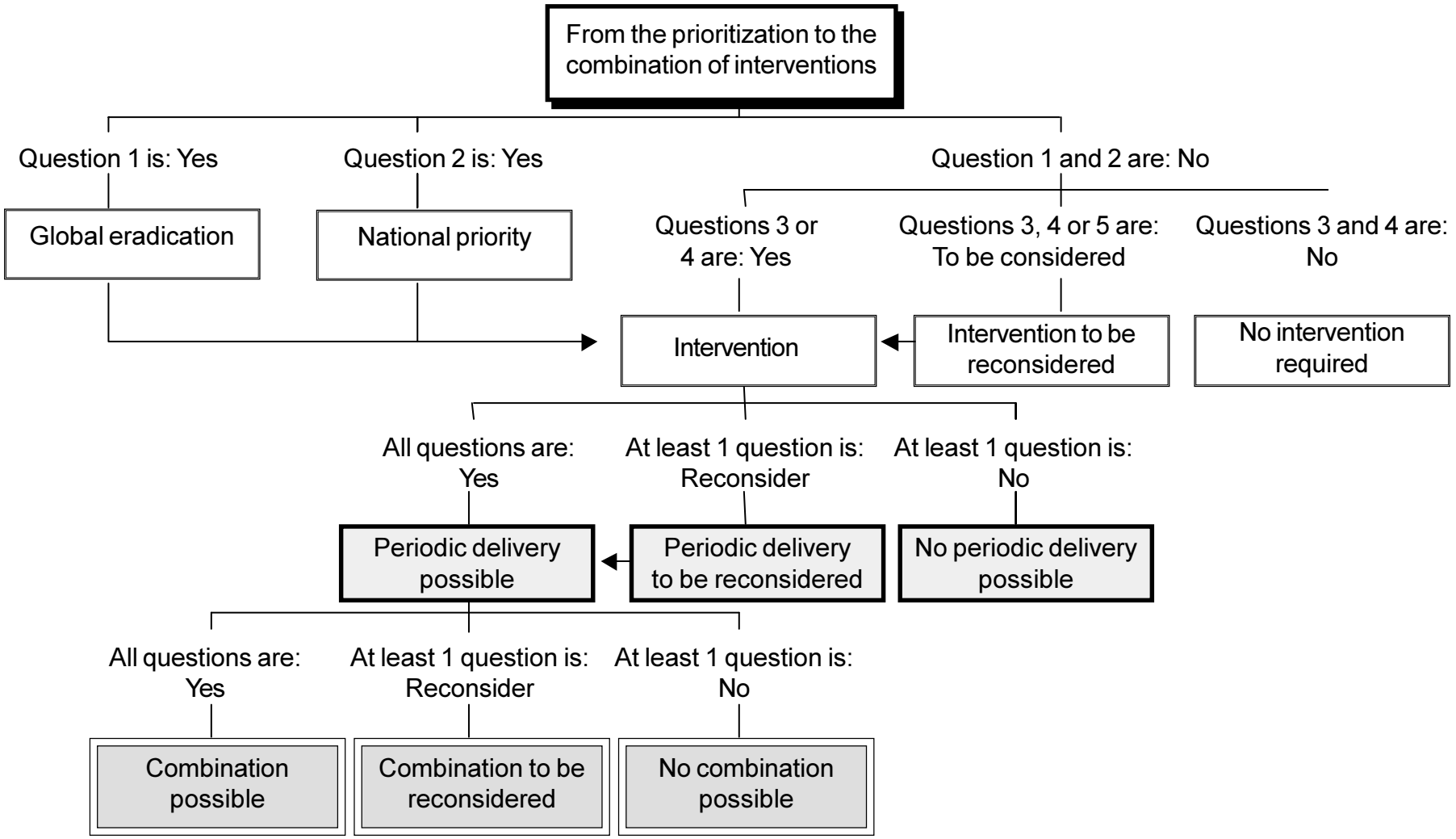
Bloc I		***What is the priority of the intervention?***		
		Yes	**To be considered**	**No**
Prioritization: should the intervention take place?	1. Is there a global eradication/elimination initiative?	**Yes (go to 6)**		**No**
	2. Is there a national eradication/elimination initiative?	**Yes (go to 6)**		**No**
	3. What is the magnitude of the problem for which intervention is considered (incidence)?	**High incidence**	**Medium incidence**	**Low incidenc**
	4. How serious is the disease in terms of mortality, permanent handicap, social disruption, or other criteria (absolute and compared to global/regional levels)?	**Very serious**	**Serious**	**Not serious**
	5. How serious is the disease perceived by the community?		**Serious**	**Not serious**
Bloc II		***Can the intervention take place in a setting of periodic contacts?***		
		Yes	**Reconsidered**	**No**
Effectiveness of the intervention: should the intervention take place in a setting of periodic contacts?	6. What is the minimum number of interventions per year required to achieve the objectives?	**1-3**	**4-6**	**> 6**
	7. Is there an epidemiological or practical reason to choose a setting of periodic contacts?	**Yes**	**No**	
	8. Does the intervention have an immediate, measurable and visible impact after each visit?	**Yes**	**No**	
	9. Does the intervention have an unacceptable negative impact in case of interruption	**No**		**Yes**
	10. Does the intervention imply referral to other health structures?	**No**	**yes**	
	11. If required, are other health structures for referral available?		**yes**	**No**
	12. Does the intervention require follow-up with a level of competence exceeding the available skills?	**No**	**yes**	
	13. Can the beneficiary or community easily be trained in that follow-up, or is assistance from the outside necessary.	**Beneficiary or community**	**outside**	

Table 9: *(continued)*

Bloc III		*Can interventions be combined?*		
		Yes	**Reconsidered**	**No**
Effectiveness of combined interventions	14. Should the intervention take place in a setting of periodic contacts: Yes if all answers in the 'Yes' column in the previous bloc were circled; Reconsider if any of the answers in the 'Reconsider' column was encircled; No if any of the answers in the 'No' column was circled.	**x**	**x**	**x**
	15. Do all interventions have to respect the same time constraint to be carried out (e.g. immunization for epidemic control versus routine)?	**Yes**	**No**	
	16. Can the intervention correctly and safely be carried out within the limits of the time constraint of the fastest one?	**Yes**	**No**	
	17. Do the compared interventions have the same target age group?	**Yes**	**No**	
	18. Do all interventions require the same minimum level of training? (no medical training, auxiliary, nurse, medical doctor, medical specialist, non-medical specialist)*	**Same level of training or training for eradication is the highest**	**Different level of training or training for intervention is not the highest**	
	19. Can one person be trained to carry out all interventions?	**Yes**	**No**	
	20. Is the equipment required for transport/storage of the same complexity? (none, simple cold chain, complete cold chain, other)	**Same type or equipment for eradication is the most complex**	**Different type**	**Equipment for eradication is not the most complex**
	21. Does the transport of the combined materials (weight/volume) require a different type of transport than for the materials of each intervention done separately? (foot, bicycle, motorcycle, car)	**No**	**Yes**	
	22. Does the type of transport required for combined interventions reduce the areas that need to be accessed for eradication activities?	**No**		**Yes**
	23. Do the interventions overlap geographically?	**Yes**		**No**

* For example, measles requires more skills than polio immunization. To add measles to polio should therefore be reconsidered.

Figure 3: Flow chart – prioritizing and combining interventions



Annex 1: Fact sheets for additional interventions

These sheets are part of the SOS guideline and give the basic characteristics of potential additional interventions. It is assumed that the decision has been taken that the intervention is suitable for SOS. A tool to help make that decision is the flow chart: "Criteria for inclusion".

Contents

Annex 1.A: Malaria prevention through distribution of mosquito nets

Questions that are not appropriate for a specific intervention can be left open.

Type of intervention: malaria prevention through distribution and proper use of insecticide treated mosquito nets (ITNs), treatment and re-treatment of nets with pyrethroid insecticides.

Morbidity in absence of intervention: one malaria attack per year per child (0–4years) in areas of stable transmission.

Mortality in absence of intervention: About one death per year for 100 children (0–4 years) in areas of stable transmission.

Intervention's impact on morbidity: reduction of 50 to 60% of malaria morbidity.

Intervention's impact on mortality: reduction of 15 to 25% of overall mortality.

Type of products: 1) Nets: either locally available or imported (bednets, hammocks, curtains…) made preferably of polyester multi-filament, 80 to 100 deniers, 156 mesh. Other locally available netting materials such as cotton or nylon may also be suitable.

2) Insecticide for net treatment/re-treatment according to WHO specifications for active ingredients and formulations and packaged preferentially under individual doses. Currently, stable pyrethroids in water-based liquid formulations or tablets are recommended. Nets should preferably be treated on the spot but may also be purchased already treated.

Mode of administration/implementation: Nets have to be distributed to the community (several possible options, from free or partly subsidized to full profit basis), ensuring:

i) proper, consistent and sustainable use by individuals, especially by the risk group (children under five and pregnant women) and ii) regular re-treatment with pyrethroid insecticides (every six months to one year according to malaria seasonality, length of transmission season and insecticide used for treatment). In case of frequent washings (one per month and over), nets will have to be re-treated after three to four months.

Treatment of nets, made either by community or individual dipping, has to be first demonstrated to users by village health workers or SOS staff and supported by appropriate educational materials, including one very simple and illustrative sheet

specifically designed for users (instructions for use). Several options available for re-treatment, from a "Treatment Day" for the whole community to a personal method of treatment using single doses (sachets, tablets) which should be made locally available throughout the year.

Target population age group: Children under five and pregnant women. Usually, the whole family has to be covered in order to have the target group protected. ITNs are effective in areas with high as well as low malaria endemicity levels.

Criteria for inclusion of individuals: No criteria for inclusion/exclusion except that priority should be given to the target group.

Criteria for exclusion of individuals: No criteria for exclusion.

Adverse events: Possibility of misuse of insecticide during or after treatment and re-treatment. However: no significant risk for human health according to safety profiles of insecticide products used for net treatment. Possible transient non-dangerous irritation of skin, eyes or sinus with some pyrethroids immediately after net treatment. Some risk of environmental impact, although very limited, if insecticide solutions are poured in large amounts into small rivers or water ponds colonized by fishes and beneficial non-target organisms.

Number of times per year the intervention must taker place to be effective: no more than once to twice a year according to malaria seasonality, length of transmission season and insecticide used. Intervention (net distribution, treatment/re-treatment) will be more effective if made just before the beginning of the transmission season (usually, the rainy season).

Required qualifications for the administration/implementation: Basic level of village health worker if adapted pamphlet/posters with simple and readily understandable instructions for use are provided to users together with nets and insecticide. Personnel of SOS teams should be able to talk about the usefulness of ITNs in preventing mosquito trouble and malaria transmission, while encouraging people within target communities to organize themselves for payment (resource mobilization, credit) and guide them on proper and sustainable use of ITNs, including need for re-treatment.

Required follow-up of treatment: providing insecticide once or twice a year for re-treatment and nets once a year for renewing damaged ones and protecting new members within the target communities. Encourage proper, consistent and sustainable use of ITNs.

Qualifications required for follow-up: Village health worker level.

Consequence of non-compliance of follow-up: Bad or incomplete malaria prevention. When creating demand for ITNs, one should ensure that further demands will be satisfied, thus nets and insecticide must be made available during subsequent SOS missions.

Does the intervention require health education: Yes, especially for the first rounds and to re-enforce the need for appropriate use and re-treatment.

Duration of protection of one intervention: six months to one year (see above).

Specific transport and storage conditions: None for transport of nets or insecticides.

Weight/volume of drugs/equipment per unit or smallest packaging: one polyester net packed in individual plastic bag weighs about 400 to 450 g and is relatively voluminous. There is, for the first distribution round at village level, an important bulk to deliver, which may require the use of a car or a small truck depending on the target population size. One net is expected to last for three to four years on average. In general, it is estimated that communities need one net for 1.8 individuals.

Insecticide may be packed either in individual doses (sachets or tablets), one litre bottles or drums (10 to 50 litres). Most commonly, one litre bottles or individual doses. One litre of formulated insecticide is enough to treat 50 to 150 nets depending on net size and requested dosage which differs from one insecticide to the other.

Sachets (6 ml insecticide formulation) or individual tablets to treat one net are very light and can easily be stored/transported. Insecticide in bulk (drums) although cheaper, should be avoided in this context because of possible misuse and losses.

Comments: Implementation of ITNs is an efficient intervention in malaria prevention, especially in areas with low transmission (Sahelian countries in Africa, highlands of Eastern/Southern Africa and Madagascar, most of Asiatic and South American countries). It has also been successfully used to prevent transmission of leishmanisasis and filariasis.

Nets are relatively voluminous to transport. On the contrary, insecticides usually act at very low doses and do not require transportation of huge bulk.

ITNs may be well suited to the SOS concept in many areas if the problem of net transportation is solved as well as financial aspects (who pays how much to whom?).

For routine evaluation:

1) What is the size of the SOS-targeted population and, possibly, the population targeted for malaria prevention (children under five, pregnant women)?
2) How many nets does the population use prior to SOS intervention?
3) How many nets have been delivered through SOS and when?
4) How much insecticide or how many individual doses have been delivered and when?

These four questions may give a reasonable idea on coverage rate and proportion of nets that have been treated/re-treated.

For more sophisticated investigations

1) How many sleeping units are fitted with a net and how many nets have been properly installed? (Survey in a representative sample of houses/human dwellings, counting separately SOS nets and "traditional" nets.)

2) What proportion of the target population is protected (pregnant women plus children under five)? (Questions addressed to a representative sample of the population.)

3) How many nets have been treated/re-treated with insecticide? (Questions addressed to a representative sample of the population.)

4) How many people were informed about the availability of nets and insecticide? How many understood the necessity to treat their net(s) with insecticide? How many have treated/re-treated their net(s)? (Information collected through simple KAP surveys.)

Annex 1.B: Scabies

Type of intervention:	Targeted treatment of individuals with symptoms and their household members
Morbidity in absence of intervention:	Considerable, and long standing as a nuisance, leading to complications such as nephritis, skin infection, deeper tissue infection and possibly rheumatic fever
Mortality in absence of intervention:	Unclear, but probably low
Intervention's impact on morbidity:	High
Intervention's impact on mortality:	Low
Type of drugs:	Topic treatment with benzyl benzoate (twice)
	Or systemic with ivermectin (once)
Mode of administration/ implementation:	topic or systemic
Target population age group: family	mainly children as index cases, and members
Criteria for inclusion of individuals:	symptoms (itchy skin rash)
	Criteria for exclusion of individuals:
Adverse events:	irritation for topical application
	ivermectin no major side effects
Number of times per year the intervention must taker place to be effective:	1–2/year
Required qualifications for the administration/implementation:	none
Required follow-up of treatment:	none
Qualifications required for follow-up:	none
Consequence of non-compliance of follow-up:	none
Does the intervention require health education:	yes, if spread occurs by contact

Specific transport and storage conditions:	benzyl benzoate liquid in containers
Weight/volume of drugs/equipment per unit or smallest packaging:	no answer
Comments:	ivermectin might be used to treat helminthic infections as well, such as onchocerciasis.

Annex 1.C: Vitamin A

Type of intervention: In communities when vitamin A deficiency is a public health problem, high-dose vitamin A supplementation of children under 6 months and post-partum women within 6–8 weeks of delivery.

Morbidity in absence of intervention: Vitamin A deficiency is the leading cause of preventable blindness in children. Measles and diarrhoea are more severe in children who are vitamin A deficient.

Mortality in absence of intervention: no answer

Intervention's impact on morbidity: In addition to reducing the severity of measles and diarrhoea, a recent study in Papua New Guinea found that vitamin A supplementation may be an effective low-cost strategy to lower morbidity due to *P. falciparum* malaria in young children (30% fewer malaria attacks and 36% reduction in the number of parasites in their blood).

Intervention's impact on mortality:

In children 6–59 months:

- 23% reduction risk of all-cause child mortality
- 50% reduction in risk of measles mortality
- 33% reduction in risk of diarrhoeal disease mortality

Type of drugs: Vitamin A capsules 100 000 IU and/or 200 000 IU dosage.

Mode of administration/implementation: oral; cut open capsule and squeeze liquid into mouth. Age-specific dosage for prevention: 100 000 IU for children 6–11 months; 200 00 IU for children 12–59 months and postpartum women.

Equipment needed for the administration/implementation: scissors and a plastic disposal bag or container.

Required means of disposal for this equipment:

Target population age group:

- children 6–59 months
- postpartum women within 6–8 weeks of delivery.

Criteria for inclusion of individuals: Children/postpartum women living in areas with a known or suspected vitamin A deficiency public health problem (as defined by the prevalence levels of selected biological indicators of VAD). Demographic and ecological risk factors for VAD include:

- IMR > 75/1000 live births.
- U5MR > 100/1000 live births.
- Full immunization coverage or, particularly measles immunization coverage, in < 50% of children 12–23 months of age.
- Median dietary intake < 50% of recommended safe level of intake among 75% of children 1–6 year of age.
- Measles CFR $\geq$ 1%.
- No formal schooling for $\geq$ of women 15-44 years of age.
- < 50% of households with a safe water source.

Criteria for exclusion of individuals: Do NOT give high-dose vitamin A capsules to pregnant women, or women of reproductive-age who may be pregnant, because of the potential harmful effects to the fetus (birth defects).

Adverse events: Side-effects are rare when the correct age-specific dose of vitamin A is given. Occasionally, some children (depending on age between 1.5–7% of children) experience loose stools, headache, irritability, fever, nausea and vomiting. These transient side-effects disappear without treatment within 1–2 days.

Number of times per year the intervention must taker place to be effective: In child populations at risk, every 4–6 months (approx. twice per year). Postpartum women only once during the safe infertile period (6–8 weeks after delivery).

Required qualifications for the administration/implementation: basic training: (i) to screen for correct age-specific dosage; (ii) opening, administering and discarding of capsule; (iii) recording vitamin A given on immunization card.

Required follow up of treatment: every 4–6 months.

Qualifications required for follow up: Same as basic training indicated above.

Consequence of non-compliance of follow up: Assuming that nutritional diet and intake has remained the same, liver stores of vitamin A will return to their depleted state within 4–6 months.

Does the intervention require health education: Mothers/caregivers should be told that vitamin A capsules will help protect the eyesight and health of their children. They should also be encouraged to feed their children foods rich in vitamin A (green leafy vegetables, orange fruits, eggs, livers).

Duration of protection of one intervention: Following high-dose vitamin A supplementation, liver stores of children will be fully replete for a period of 4–6 months.

Specific transport and storage conditions: Vitamin A capsules do not require refrigeration or cold chain, but should be kept dry and out of direct sunlight. They should NOT be frozen. A bottle of vitamin A capsules, if unopened, will keep its potency under good storage conditions for at least two years. However, once a bottle is opened, the capsules should be used within one year. Storage of the 100 000 IU and 200 000 IU capsules (generally different colours) should be separate and clearly identified, so not to mix up the two doses.

Weight/volume of drugs/equipment per unit or smallest packaging: Both the 100 000 IU and 200 000 IU capsules come in containers of 500 capsules which weigh 222 grams per pack.

Comments: Vitamin A capsules are also used to treat measles and clinical vitamin A deficiency (i.e. xerophthalmia). It should be noted that the dosage schedule is different when using vitamin A for treatment and includes infants under six months of age.

Minimum evaluation: coverage of vitamin A capsule (VAC) distribution before and after intervention.

Maximum evaluation: baseline serum retinal survey (to assess vitamin A status of population) and then ex-post follow-up survey after several rounds of the intervention.

Annex 1.D: Soil-transmitted helminth infections

Type of intervention: control of morbidity due to **soil-transmitted helminth infections.**

Morbidity in absence of intervention: important, related to endemic level.

Mortality in absence of intervention: some direct mortality in children under five, otherwise indirect mortality.

Intervention's impact on morbidity: excellent.

Intervention's impact on mortality: good.

Type of drugs: any of the four following drugs: albendazole, medendazole, levamisole or pyrantel.

Mode of administration/implementation:

albendazole: single oral dose of 400 mg

medendazole: single oral dose of 500 mg

levamisole: single oral dose of 2.5 mg/kg

pyrantel: single oral dose of 10 mg/kg

Equipment needed for the administration/implementation: weight scale in case levamisole or pyrantel is used.

Required means of disposal for this equipment: none.

Target population age group: pre-school children, school age children (5–19); girls and women of childbearing age.

Criteria for inclusion of individuals: highly infected or living in a highly infected area (see WHO guidelines for treatment strategies).

Criteria for exclusion of individuals: none.

Adverse events: none.

Number of times per year the intervention must taker place to be effective: 1–3 (depending on epidemiological situation).

Required qualifications for the administration/implementation: nurse, nurse aid or teacher.

Required follow up of treatment: none.

Qualifications required for follow-up: N/A.

Consequence of non-compliance of follow-up: none.

Does the intervention require health education: yes, as a complement.

Duration of protection of one intervention: depending on the endemic level, four months to one year.

Specific transport and storage conditions: none.

Weight/volume of drugs/equipment per unit or smallest packaging: tins 1000 tablets.

Comments: further details on treatment strategies are contained in the WHO guidelines for the evaluation of soil-transmitted helminthiasis and schistosomiasis at community level – WHO/CTD/SIP/98.1.

Annex 1.E: Schistosomiasis

Type of intervention: control of morbidity due to schistosomiasis**.**

Morbidity in absence of intervention: important, related to endemic level.

Mortality in absence of intervention: mainly late, indirect mortality.

Intervention's impact on morbidity: excellent.

Intervention's impact on mortality: good, long-term.

Type of drugs: praziquantel .

Mode of administration/implementation: single oral dose, 40 mg/kg.

Equipment needed for the administration/implementation: weight scale.

Required means of disposal for this equipment: none.

Target population age group: school age children (5–19); adults in special occupation groups (irrigation workers, fishermen).

Criteria for inclusion of individuals: infected or living in a highly infected area (see WHO guidelines for treatment strategies according to the epidemiological situation).

Criteria for exclusion of individuals: pregnancy (as a general rule).

Adverse events: generally mild side-effects (abdominal pain, transient diarrhoea, nausea, dizziness), occasionally benign allergic reactions if patient is heavily infected.

Number of times per year the intervention must take place to be effective: one

Required qualifications for the administration/implementation: nurse, nurse aid or teacher.

Required follow-up of treatment: check for vomiting and allergic reactions during hours following treatment.

Qualifications required for follow-up: nurse or nurse aid.

Consequence of non-compliance of follow-up: no severe consequences.

Does the intervention require health education: yes, as a complement.

Duration of protection of one intervention: depending on the endemic level, but at least one year.

Specific transport and storage conditions: none.

Weight/volume of drugs/equipment per unit or smallest packaging: tins of 500 or 1000 tablets.

Comments: the decision to indiscriminately treat all individuals in a population or in certain high-risk groups, or to treat individuals selectively (after some form of diagnosis like a urine dipstick, or microscopic examination) depends on the endemic level (prevalence and intensity of *Schistosoma* infection in a population). WHO guidelines are available to this respect (Guidelines for the evaluation of soil-transmitted helminthiasis and schistosomiasis at community level – WHO/CTD/SIP/98.1).

Annex 1.F: Malaria treatment

Type of intervention: Provision of early diagnosis and effective treatment of malaria at community level through SOS interventions in sub-Saharan Africa.

Morbidity in children under 5 in the absence of intervention:

1–3 clinical episodes of malaria per child

3–7% of clinical episodes are severe (potentially life threatening) malaria

1–2% of severe episodes result in neurological sequelae

10% prevalence of malaria-associated anaemia

Mortality in the absence of intervention: Malaria contributes to 25% of the under-five mortality rate in sub-Saharan Africa.

Intervention's impact on morbidity: While hard data are not available on the impact of community-based malaria disease management interventions, significant reduction can be expected in the incidence of severe malaria, neurological sequelae and prevalence of anaemia (probably >30%).

Intervention's impact on mortality: Significant reduction of total malaria mortality rate (as an effect of impact on both direct and indirect malaria mortality rates). Few uncontrolled studies have shown >20% reduction in mortality.

Type of drugs: Effective first-line treatment of malaria (chloroquine in sensitive areas, sulfadoxine-pyrimethamine or amodiaquine)

Mode of administration/implementation: Pre-packaging of drugs, training of providers/dispensers and health education of the community to improve compliance. Delivery from SOS through permanent human resources in the community, such as village health agents, women groups, school teachers, etc. System in place to ensure high turnover of pre-packaged drugs (maximum one month) to avoid drug degradation from sunlight and humidity.

Equipment needed for administration/implementation: Drugs in pre-packaged forms (sealed plastic bags with full individual course adjusted for age/weight), training materials for providers and health education materials for the community. For each dispenser: water-resistant bag for transport of drugs, and registration book/pencil for patient recording.

Required means of disposal for this equipment: Not applicable.

Target population age group: Children under five years of age in areas of intense transmission. All age groups in areas of moderate or low transmission.

Criteria for inclusion of individuals: All febrile patients detected by palpation or history of recent fever (within the previous 2 days).

Criteria for exclusion of individuals: None.

Adverse events: No significant adverse events when these drugs are used for treatment of malaria.

Number for times per year the intervention must take place to be effective: All year round even in areas with seasonal malaria.

Required qualifications for administration/implementation: Preferably ability to read and write for recording, albeit specific forms can be devised for recording by illiterate village health workers.

Required follow-up of treatment: Continuous presence of drug providers in the village to detect early and (possibly) refer treatment failures.

Qualifications required for follow-up: Same as for administration/implementation.

Consequences of non-compliance of follow-up: Mismanagement of treatment failures, evolution into severe malaria or chronic anaemia, patient distrust in the intervention and change in health-seeking behaviour.

Does the intervention require health education: Yes.

Duration of protection of one intervention: Not applicable (maximum 3 days?)

Specific transport and storage conditions: None (see above "mode of administration/ implementation").

Weight/volume of drugs/equipment per unit or smallest packaging: Up to a maximum of 20g (vol. = 15ml? for a sealed plastic bag with 2–3 tabs).

Annex 1.G: Iodine supplementation

Type of intervention: In areas where iodine deficiency disorders (IDD) are a severe public health concern and there is an absence of any salt iodization programme and one is not planned for within 1–2 years, oral iodized oil capsules may be provided.

Morbidity in absence of intervention: people affected by iodine deficiency will have cretinism, goitre, reduced mental function and increased neonatal mortality.

Mortality in absence of intervention: stillborns, miscarriages.

Intervention's impact on morbidity: elimination of IDD such as goitre and cretinism.

Intervention's impact on mortality: decrease in number of still births, miscarriages.

Type of drugs: iodized oil – capsule form annually

Pregnant women 300–480 mg

Non pregnant women 400–960 mg

Infants 100–300 mg

1 – 5 yrs 300–480 mg

5 – 15 yrs 400–960 mg

males 400–960 mg

Mode of administration/implementation: oral.

Equipment needed for the administration/implementation: Good logistics.

Required means of disposal for this equipment: none

Target population age group: IDD – pre-school children and pregnant women

Criteria for inclusion of individuals: Provide to all individuals in populations at risk (especially vulnerable are children and pregnant women). Public health concern when total goitre rate in school age children is > 5%.

Criteria for exclusion of individuals: patients more than 40 years.

Adverse events: No adverse events if appropriate doses are given.

Number of times per year the intervention must take place to be effective: once a year.

Required qualifications for the administration/implementation: none.

Required follow-up of treatment: on annual basis if required.

Qualifications required for follow-up: same as initial requirement but need to initiate salt iodization programme.

Consequence of non-compliance of follow up: IDD.

Does the intervention require health education: nutrition education.

Duration of protection of one intervention: one year.

Specific transport and storage conditions: none.

Weight/volume of drugs/equipment per unit or smallest packaging: no answer

Comments: Iodine supplements for areas of severe endemic not yet reached by iodized salt, which is the preferred strategy. The use of iodized oil should not divert health authorities from implementing a programme of salt iodization.

Annex 1.H: Iron supplementation

Type of intervention: Prevention and control of iron deficiency anaemia (IDA).

Morbidity in absence of intervention: no precise figure, but more than 50% of preschool children and pregnant women in developing countries suffer from IDA.

Mortality in absence of intervention: maternal mortality is increased because of IDA.

Intervention's impact on morbidity: reduction of IDA.

Intervention's impact on mortality: reduction of maternal mortality.

Type of drugs: Iron/foliate tablets. 60 mg iron, 400 mg folic acid for pregnant women.

12.5 mg iron and 50 mg folic acid for pre-school children

Mode of administration/implementation: Oral.

Equipment needed for the administration/implementation: Good logistics.

Required means of disposal for this equipment: no special disposal system required.

Target population age group: Infants, pregnant women and if possible childbearing age women.

Criteria for inclusion of individuals:

All pregnant women with haemoglobin levels below 11.0

Non-pregnant women with haemoglobin levels below 12.0

Children (6 months–5 years) with haemoglobin levels below 11.0

Children (5–11 years) with haemoglobin levels blow 11.5

Children (12–13 years) with haemoglobin levels below 12.0

Criteria for exclusion of individuals: severely malnourished children

Adverse events: No adverse events if appropriate doses are given. But minor side-effects causing problems of compliance.

Number of times per year the intervention must take place to be effective: daily intake for several months.

Required qualifications for the administration/implementation: none.

Required follow-up of treatment: monitoring of iron levels.

Qualifications required for follow-up: same as initial requirements.

Consequence of non-compliance of follow-up: IDA levels remain depleted.

Does the intervention require health education: nutrition education.

Duration of protection of one intervention: one day, if provide only one capsule.

Specific transport and storage conditions: none.

Weight/volume of drugs/equipment per unit or smallest packaging:

Comments: Iron supplement can contribute to prevent IDA, but cases of anaemia in developing countries are also due to other causes (hookworms, malaria, infection, micronutrient deficiency). It is essential to combine iron supplements with other public health measures to obtain the full benefit on health of iron supplement. Note, there are separate guidelines for treatment of severe anaemia (hb<7.0g/dl) which require different dosage.

Annex 1.I: Lymphatic filariasis

Type of intervention: mass chemotherapy: albendazole with either Di Ethyl Carbamazine or ivermectin

Morbidity in absence of intervention: variable from country to country and within country

Mortality in absence of intervention: negligible

Intervention's impact on morbidity: prevents lymphatic filariasis infection and, therefore morbidity, disability and economic loss in all endemic populations. Improves health of children and women of child bearing age by intestinal de-worming effect

Intervention's impact on mortality: nil

Type of drugs: tablets

Mode of administration/implementation: oral administration

Equipment needed for the administration/implementation: nil, except a simple tool for measuring height for calculation of dose of ivermectin, like a stick marked for different height ranges for calculation of dose.

Required means of disposal for this equipment: no disposal required.

Target population age group: above two years in case of the DEC + albendazole combination (excluding countries where onchocerciasis is coendemic); above five years in case of ivermectin + albendazole combination (in countries with coendemic onchocerciasis). Areas with loa loa infection to be excluded.

Criteria for inclusion of individuals: all above two or five years, depending upon drug combination, residing in defined endemic area.

Criteria for exclusion of individuals: pregnant and breastfeeding women; children below the age of two years for DEC + albendazole combination and below five years for ivermectin + albendazole combination; severely sick individuals.

Adverse events: mostly mild and self-limiting.

Number of times per year the intervention must take place to be effective: at least once a year.

Required qualifications for the administration/implementation: no specific qualification required. Should understand simple instructions, and preferably be able to write numbers.

Required follow-up of treatment: passive follow-up for adverse-events if any.

Qualifications required for follow up: none.

Consequence of non-compliance of follow up: no answer

Does the intervention require health education: yes.

Duration of protection of one intervention: one year.

Specific transport and storage conditions: none.

Weight/volume of drugs/equipment per unit or smallest packaging: no answer

Comments: the Programme for Elimination of Lymphatic Filariasis envisages the administration of mass chemotherapy to the population at risk. Mass chemotherapy can be achieved by either DEC-fortified salt or mass administration once annually of drug combination of albendazole with DEC or ivermectin. DEC cannot be given in areas with coexistent onchocerciasis – most of Africa and the Americas – where ivermectin needs to be administered.

DEC, ivermectin and albendazole are already being administered in many countries for filariasis and helminthiasis. Community-directed treatment strategies have also been implemented.

Annex 1.J: Guinea worm eradication

Type of intervention: Guinea worm eradication.

Morbidity: in absence of intervention, not predictable. However, occurrence of new cases is seasonal and can be very high, up to 80–100% of the population of a village. Factors influencing transmission from one year to the next are mostly climatic.

Mortality: in absence of intervention, low. However, a substantial number of unattended patients will develop secondary infections of the emerging worm wounds, which will develop into septicaemia. Multiple worm emergence (can be more than 10 at a time) and immunosuppression makes patients particularly vulnerable to septicaemia.

Intervention impact: highly effective impact on morbidity and mortality (direct relationship). The reduction of incidence can reach 90% when appropriate prevention steps are adopted (case-containment strategy, health education, improvement of drinking water quality).

Drugs: not available to treat cases. They do not exist. Furthermore, **no immunity** is acquired on infection. Thus drinking contaminated water will cause single or multiple infections year after year (emergence of the worm takes approximately 12 months after infection).

Prevention: measures are implemented through trained health personnel and Village Based Volunteers. They execute the case-containment strategy (active case search, early detection and detection), the distribution of filter cloth (monofilament nylon), and the mobilization of the community through health education messages on safe drinking water. At national level, prevention can be implemented by providing villagers with safe water sources (bore holes, deep wells and piped water).

Equipment and material: required for logistics and preventive measures. Supervising health staff will need transportation for monthly supervision visits and Village Based Volunteers to go from household to household (at least one vehicle, motorbikes and bicycles). Prevention requires nylon fine-mesh filter cloth, and medical kit for wound management (emerging worm). Kits include basic instruments (scissors, tweezers, etc.) bandages, gauze, disinfectant, antibiotic ointment.

Disposal of case containment material: not needed.

Target population: general. No particular age group is less affected than another. Young children are probably more exposed to infection by lack of attention to preventive measures.

Criteria for inclusion: regarding preventive measures, all guinea worm infected individuals must be attended to (cases contained) and all water sources must be prevented from becoming contaminated. This is the only condition for interruption of transmission of the disease.

Criteria for exclusion: there is no exception in implementing preventive measures.

Adverse events: none.

Frequency of interventions: surveillance of guinea worm must be maintained throughout the year. The seasonal pattern of transmission of the disease, however, will cause an annual period of activity upsurge. The high transmission season can occur either during the rainy or the dry season, depending on the areas concerned. It is rather rare that two high transmission seasons occur in the same area.

Qualifications required of staff for programme implementation: all staff and volunteers must be trained to ensure proper implementation of supervision and prevention activities. Equipment and material must be available on time, so timely distribution and use can take place. Information flow must be smooth. Data collected at village level must move regularly, on a monthly basis, to the district, province and national level, so any guinea worm case increase can be immediately identified and attended to.

Programme follow-up: regular, monthly, supervision of VBV must take place. Supervisors are not necessarily health staff; they can be teachers, agriculture extension workers or other personalities of the village. Supervision of supervisors must take place from time to time. No supervision results in loss in motivation followed by inadequate prevention activities at all levels. One of the important roles of supervision is the replenishment of VBV case-containment material.

Health education: essential at all levels. Individual and community participation and compliance in prevention measures depends on understanding.

Storage specifics for programme material: although filter cloth requires no particular attention, rolls of cloth must be protected from rodents. Medical kits must be renewed regularly (for gauze sterility and antibiotic cream effectiveness). The pesticides Abate used for intermediate host destruction (Cyclops) must be kept in its drum and out of public reach.

Weight and volume of containment material per kit (VBV pack): enough for the management of approximately 8–10 cases. Each kit is approximately 1.5 kg. Thirty kits would occupy a space of one cubic meter. The number of kits required must be based on the number of endemic villages and case predictions. In villages under surveillance where transmission has been interrupted, a single kit would be sufficient to contain any case that might occur, in a timely fashion. Replenishing material for the kit must be based on field requests for the content of the kit (see programme follow-up).

Integration of activities: the guinea worm VBV network can be used successfully for other activities. When the number of cases of guinea worm has been reduced, VBV can and are often willing to participate in other activities. The VBV network in war-affected areas, where no health services are available, is particularly useful as volunteers can deliver, to a limited extent, health-related services.

Annex 1.K: Environmental management for disease vector control

Type of intervention: Environmental management for disease vector control (malaria, schistosomiasis, filariasis, dengue/dengue haemorrhagic fever, leishmaniasis, Chagas disease).

Morbidity: varies per region and per disease, substantial burden of disease due to Vector Borne Diseases in sub-Saharan Africa, South and South-East Asia, parts of the Western Pacific and foci in the Americas.

Mortality: malaria > 1 million/year, but attribution to environmental risk factors complex and varies per region.

Intervention's impact on morbidity: intervention aims at transmission risk reduction, so it:

1) contributes to the sustainability of disease-oriented interventions;
2) supports health of vulnerable groups with no or irregular access to health services; and
3) reduces infection intensity.

Intervention's impact on mortality: difficult to attribute – transmission reduction rather than disease reduction.

Type of drugs: N.A.

Mode of administration/implementation: strategic risk assessment followed by design and implementation of location-specific environmental management measures and monitoring of transmission indicators.

Equipment needed for implementation: varies from simple shovel/spade type tools, and materials for personal protection (nets, screens) to hydraulic structures in irrigation schemes and strategically located cattle sheds where zoo prophylaxis can be practised.

Required means of disposal: can be re-utilized.

Target population: depending on disease/region: entire community or groups within the community that are, because of behaviour, occupation, immune status or living conditions, exposed to increased risks.

Criteria for inclusion: should be community driven.

Criteria for exclusion: not applicable

Adverse events: major climatic/demographic changes that disturb the balance of risk factors

Number of times the intervention must take place: this is not a discrete intervention but an ongoing process, requiring regular monitoring and incentives.

Required qualifications for implementation: sound knowledge of vector biology and ecology; capacity to engage the local community in a participatory approach.

Required follow-up: monitoring.

Qualifications: as previously mentioned.

Consequence of non-compliance: increased transmission risks, increased morbidity/mortality.

Does the intervention require health education: yes, on:

1) environmental management measures (possibly with agriculture extension);
2) monitoring of transmission risk factors and transmission indicators.

Duration of protection:

1) Environmental modification: long-term effect (years);
2) Environmental manipulation needs repeated action.

Specific transport/storage conditions: depends on disease/region; generally no special conditions

Weight/volume: N/A

Comments: this is an environmental health approach of an exclusively preventive nature, of a strong intersectoral nature.

Annex 1.L: Onchocerciasis

Type of intervention: onchocerciasis control.

Morbidity in absence of intervention: high prevalence of the disease and of blindness within the endemic population.

Mortality in absence of intervention: nil.

Intervention's impact on morbidity: notable reduction of the prevalence of the disease and of the blindness.

Intervention's impact on mortality: nil.

Type of drugs: Mectizan (ivermectin).

Mode of administration/implementation: oral.

Equipment needed for the administration/implementation: registration book, height-measuring stick.

Required means of disposal for this equipment: nothing special.

Target population age group: persons from five years old.

Criteria for inclusion of individuals: persons from the age of five years and measuring 90 cm of height.

Criteria for exclusion of individuals: children under the age of five years or less than 90 cm in height; pregnant women; women who are breastfeeding a baby who is less than a week old; people who are very sick.

Adverse events: itching; oedema (sometimes generalized but usually localized, on the face, for example); fever; pain in any part of the body; dizziness or syncope; diarrhoea, etc.

Number of times per year the intervention must take place to be effective: once or twice a year.

Required qualifications for the administration/implementation: no special professional qualification is required. The distribution is done by the communities (community distributors who are community members trained for the distribution of the drug to their population).

Required follow-up of treatment: the monitoring and the supervision are done by health workers.

Qualifications required for follow-up: nurses, medical doctors or other qualified health workers.

Consequence of non-compliance of follow-up: wrong treatment of the population by community distributors (misdosages) or non-treatment, shortage of drug, etc.

Does the intervention require health education: yes.

Duration of protection of one intervention: About one year.

Specific transport and storage conditions: nil.

Note: the tablets cannot be used four months after the opening of the package (bottle).

Weight/volume of drugs/equipment per unit or smallest packaging: 500 tablets of 3 mg per bottle

Comments: most of the side-effects are temporary and may disappear within 24 or 48 hours. The exclusion criteria are also temporary.

Evaluation: both process and intervention evaluation are regularly undertaken. On average, entomological evaluation is done annually while epidemiological evaluation is every three years by the programme staff. In addition to this, programme evaluation is also carried out by a team of external experts at least every six years (corresponding to the duration of each funding phase) or any time at the request of the programme governing body. Such evaluations aim, among others, to assess programme achievements, to consequently readjust operational strategy where necessary and to better plan for the devolution of residual activities to the participating countries at the end of the programme.

Annex 2: Costing framework for SOS

Projected costs of SOS should be estimated in the project budget. In the budget all costs of planned activities according to resource items should be specified. During the course of SOS, expenditures should be closely monitored, and it should be ensured that these are kept in line with what was predicted in the budget. If at any time there is a mismatch between expenditures and budget, the budget must either be modified or there must be a change in activities to keep expenditures back on track.

The budget should be prepared using the "ingredient approach", which involves translating the general description of the service into specific resource requirements. All resources required should be listed along with the quantities of each resource, the unit price and for capital items, the expected life of the item. An example of a cost estimation for a long-tem budget preparation of a hypothetical SOS project is outlined in Table 10.

The following principles should be followed when estimating costs of SOS:

1) The value of capital items should be annualized so that these can be compared with recurrent costs in a useful way. The economic costs of capital items on an annualized basis should be calculated from the current value of the item, its useful life and a discount rate (as recommended by the economic planning office or the ministry of finance should be used).

2) If SOS share resources with district health services or other programmes, the costs of these should be estimated as "shared inputs". A proximation of the costs of shared inputs should be estimated by allocating a certain percentage of the total costs to the SOS services.

3) Cost estimates should reflect economic as well as financial costs. That is, even resource items that are not paid for by the SOS project, such as vaccines donated by a third party, should be included at their full value. Only if all inputs are included at their full value can cost estimates support the long-term sustainability of SOS.

Table 10. Example of profile for cost estimation of a SOS programme including immunization services, vitamin A supplementation, malaria bednets and malaria treatment

Input	Description (type and unit of measure)	Quantity (number of units) Q	Price per unit P	Useful life	Annulization factor	Annulized costs[4] (Q x P)/A
Capital Building space Vehicles Motor cycles Cold chain equipment Training, non-recurrent Social mobilization, non-recurrent						
Subtotal, capital						
Recurrent Medical officer Nurse Nursing assistant						
Subtotal, personnel						
Measles vaccine DTP vaccine Vitamin A capsules Chloroquine Primaquine Paracetamol						
Subtotal, drugs and vaccines						
AD syringes						
Subtotal, medical supplies						
Bednets Safety boxes Fuel Stationery Vaccination cards						
Subtotal, other supplies						
Cold chain, operation & maintenance Vehicles, operation & maintenance Buildings, operation & maintenance Training, recurrent Social mobilization, recurrent						
Subtotal, services						
Subtotal, recurrent						
Total						

[4] For recurrent costs the annulization factor is 1

Annex 3: Bibliography

Albonico M., Savioli L. Hookworm infection and disease: advances for control. *Annali dell Instituto Superiore di Sanita*, 1997, 33(4):567–579.

Montresor A, Crompton DWT, Bundy DAP, Hall A, Savioli L. *Guidelines for the evaluation of soil-transmitted helminthiasis and schistosomiasis at community level*. (WHO/CDS/SIP/98.1),

Montreso A, Urbani C, Camara B, Bha AB, Albonico M, Savioli L. Enquete préliminaire à la mise en place d'un programme de santé scolaire en Guinée. *Medecine Tropicale,* 1997, 57: 294–298.

Stoltzfus RJ, Dreyfuss ML. *Guidelines for the use of iron supplements to prevent and treat iron deficiency anemia*. INAG, WHO, UNICEF. International Life Sciences Intitute, Washington, 1998.

Bench aids, for the diagnosis of intestinal parasites. Geneva, WHO, 1994.

Distribution of vitamin A during national immunization days. Geneva, World Health Organization, 1998 (WHO/EPI/GEN/98.06).

Dracunculiasis or guinea worm. Medical strip cartoon. Geneva, World Health Organization, 1999 (WHO/CDS/CEE/DRA/99.2).

How to give vitamin A supplements – A guide for health workers. Geneva, World Health Organization, 1993 (WHO/EPI/TRAM/93.06).

Integration of vitamin A supplementation with immunization: policy and programme implications. Report of a meeting, 12–13 January. UNICEF, New York. 1998 (WHO/EPI/GEN/98.07).

Iodine and Health; eliminating iodine deficiency disorders safely through salt iodization. Geneva, World Health Organization, 1994 (WHO/NUT/94.4).

Iodized oil during pregnancy. Geneva, World Health Organization, 1996 (WHO/NUT/96.5).

Juma and schistosomiasis. Medical strip cartoon. WHO, UNICEF, CHADU, 1997.

Le paludisme. Medical strip cartoon.WHO/CDS/CPC/SAT/99.1.

Recommended iodine levels in salt and guidelines for monitoring their adequacy and effectiveness. Geneva, World Health Organization, 1996 (WHO/NUT/96.13).

Report of the WHO informal consultation on hookworm infection and anaemia in girls and women. Geneva, World Health Organization, 1996 (WHO/CTD/SIP/96.1).

Report of the WHO informal consultation on monitoring of drugs efficacy in the control of schistosomiasis and intestinal nematodes. Geneva, World Health Organization, 1999 (WHO/CDS/CPC/SIP/99.1).

Report of the WHO informal consultation on the use of chemotherapy for the control of morbidity due to soil-transmitted nematodes in humans. Geneva, World Health Organization, 1996 (WHO/DTD/SIP/96.2).

Sleeping sickness. Medical strip cartoon. Geneva, World Health Organization, 1997.

Stratégie mondiale de lutte antipaludique. Geneva, OMS, 1994.

Using immunization contacts as a gateway to eliminating vitamin A deficiency. Geneva, World Health Organization, 1994 (WHO/EPI/GEN/94.09).

Using national immunization days to deliver vitamin A. EPI Update 33. Geneva, WHO/EPI, November 1998.

Vitamin A; a strategy for acceleration for progress in combating vitamin A deficiency. Vitamin A, Global Initiative, New York, 1997.

The Onchocerciasis Control Programme in West Africa. Geneva, World Health Organization, 1994.

Oncho Information. Bulletin d'information trimestriel, January–February–March 2000, No. 1.

25 years OCP, 1974–1999. WHO Onchocersiasis Control Programme in West Africa.

Onchocerciasis. WHO fact sheet No. 95, revised 1999. Geneva, World Health Organization, 1999.

African programme for onchocerciasis control (APOC), brochure, who African Programme for Onchocerciasis Control, Ouagadougou, 1999.

Evaluation of Sustained Outreach Services (SOS) in Indonesia
Proposed Evaluation Design Framework

Background

For many years, the national Expanded Programme on Immunization (EPI) in Indonesia has shown high overall performance, with WHO/UNICEF estimating national coverage rates of 80% or higher indicated for all EPI antigens. Survey data indicates somewhat lower national coverage figures, however, and in addition, national figures mask pockets of lower performance in some areas. These are generally in inaccessible or remote locations where available transport options are limited, terrain is challenging and populations are small and dispersed. As a result, service delivery is often difficult, time consuming and expensive to provide or sustain on a regular basis, and in such areas, infants and children typically do not have access to the high levels of health care provided in other parts of the country.

In an attempt to address these inequities and to achieve its Millennium Development Goals, (MDGs) the Ministry of Health (MOH), through its National EPI located within the Directorate General of Disease Control and Environmental Health, has piloted a strategy known as 'Sustained Outreach Services'(SOS) in selected areas of Indonesia. This intervention is based on a global WHO strategy and adapted by the MOH to provide populations in remote areas with a package of basic immunization and maternal health services, on a regular and sustainable basis. Beginning In 2009, this approach has been progressively phased into a number of remote locations of priority districts in three provinces in Eastern Indonesia, with financial support from UNICEF and technical support from both UNICEF and WHO. Lessons learned from this pilot activity will assist in formulating national EPI policy and in enhancing programme strategies, and after the initial two years of operation, MOH now requires an evaluation of the experiences and resulting impact on programme performance of the intervention.

At the request of UNICEF country office in Indonesia, the evaluation will be conducted by John Snow, Inc.(JSI), an international public health organization with substantial experience in immunization programmes worldwide, and of their monitoring, evaluation and implementation (Annex 1). The Terms of Reference for the evaluation were prepared by UNICEF in May 2011 (Annex 2).

Purpose of the Evaluation

The evaluation is intended to assess the relevance, effectiveness and efficiency of the Sustained Outreach Services (SOS) strategy as it is applied in the current target areas of Indonesia. The specific purposes of this activity will be to:

1. Document the factors that have supported SOS programming in Indonesia, including those that have led to changes in immunization coverage in the target areas,
2. Recommend sustainable mechanisms as considered appropriate for wider application of SOS in the national EPI and the broader child survival programmes of the government,
3. Identify any needs for additional human and financial resources required towards solving inequities in the long term, that will increase and sustain immunization coverage levels in hard to reach areas, and
4. Contribute to global knowledge on equity and evidence-based cost effective/ cost efficient strategies for reaching the poorest populations in geographically hard-to-reach areas.

In addition, the evaluation will attempt to identify key elements that contributed to SOS programme implementation, to further determine gaps in achieving EPI coverage targets, and to summarize the lessons learned.

Evaluation Design

The proposed overall design for conducting the evaluation was detailed in a proposal document, submitted by JSI to the UNICEF country office in Indonesia on 15 June 2011. This design outlines 3 main phases to the evaluation as follows:

Phase 1: Desk review and draft evaluation design
Phase 2: Field work
Phase 3: Preparation of the final report

The main activities proposed will be conducted during each of these phases :

Phase 1 (September – October 2011)
- conducting a desk review of all available background documents and data sources
- holding initial meetings with MOH, UNICEF, other partners and the evaluation reference group
- preparing a draft evaluation design framework
- sharing the draft evaluation design with all partners and the reference group
- incorporating all feedback received into a finalized and agreed design framework

Phase 2 (October – November 2011)
- collecting quantitative and qualitative data at national level, and at provincial, district, health facility and community levels in the three provinces where SOS has been implemented
- reviewing and analyzing the data collected, in terms of quality and completeness
- drafting the evaluation findings, answers to research questions and the provisional recommendations
- sharing the draft findings and provisional recommendations with the evaluation reference group and soliciting response and feedback
- proposing an outline for the final report of the evaluation

Phase 3 (November – December 2011):
- completing the draft final report together with a Power-Point presentation summarizing the findings and conclusions of the evaluation
- presenting the draft final report at a meeting with the reference group
- revising and finalizing the report based on comments and feedback received
- presenting the final report to the UNICEF country office in Indonesia

Phase 1 Activities
Phase 1 activities are currently in progress at the time of writing, and the preparation and submission of this Proposed Evaluation Design Framework is part of the process. For other activities shown under Phase 1 above, the team has conducted a desk review of available background documents and data sources, held initial meetings with MOH, UNICEF, WHO, and other partners including the evaluation reference group, and drafted an evaluation design framework.

These initial activities have revealed that only very basic background, conceptual or planning documentation on the SOS strategy, or the rationale and mechanism for its introduction, is available within country. Furthermore, many of the staff at UNICEF and the MOH-EPI who were involved with the original design of the project are no longer engaged on the programme. The team was nevertheless fortunate to obtain some critical information, after contacting a number of former UNICEF and WHO staff members who had been involved in the early stages of SOS discussion and introduction, from around 2006 to 2009. Apart from this background material, it appears that little national policy and strategy documentation that can guide and inform the implementation of SOS has been produced to date.

The main source of local information reviewed by the team is the quantitative data on immunization performance, which is available for all parts of the country, and obtained through the national routine health reporting system. These data show some improvement in immunization performance for some, although not all, of the areas currently implementing SOS. It should be noted, however, that the strategy has only been operating for a maximum of 2 years in any one district, and due to phasing-in of the programme, some of the districts have had less than 1 year of operational experience to date. In this context, an evaluation at this very early stage in the introduction of SOS should not expect to

observe significant quantitative results, and for this reason, the main focus of the evaluation will be on process rather than on outcome.

With this in mind, the team has drafted an Evaluation Design Framework, with the intention of collecting both qualitative and quantitative data from as many sources as possible, including the MOH, UNICEF, WHO, donors, NGOs, public health managers, health workers, the community and parents.

Annex 4

Design Framework

Research Question	Indicator	Data Source	Data Collection Method
Design			
• What were the specific objectives and characteristics of the SOS strategy, as it was originally designed? • What were the assumptions behind the design? • Who was involved in the design process and how were they involved? • How did those who designed SOS define success?	• **Partners**. List of SOS partners, activities, and locations available and up to date. • **Focal point**. MOH-led SOS focal point/unit in place • **Targets**. SOS target areas defined based on district-specific criteria • **Policy**. SOS lessons are documented and will be used as advocacy tools by MOH and partners in preparing a national policy on SOS as a strategy to provide outreach EPI-MCH services in remote areas.	• UNICEF progress reports • MOH Administrative coverage data • 2008 RisKesDes • Key informants (UNICEF, WHO, MOH)	• Document review • Interviews at the • national level and at provincial and district level if lower levels were involved in the design
Implementation			
• How was the SOS strategy introduced? • Was it implemented in the target districts as originally intended? • Is there a uniform understanding of the strategy? • If it was not fully implemented or implementation varied from site to site, what changes were made, by whom, and why? • Based on implementation experiences, who were the key decision makers and champions?	• **Communication strategy**. Strategy developed for introducing and coordinating SOS community visits • **Human resources**. Proportion of district and health facility staff providing SOS services. • **Logistics**. Percentage of districts and health facilities with all key medicines and supplies for SOS adequately stocked in time for the last 3 SOS rounds • **Complete, consistent registration of SOS Services**. Proportion of registers that show full details of services provided and performance during last 3 SOS rounds • **Supervision coverage**. Proportion of SOS staff who had at least 1 supervisory contact per implementation year	• UNICEF progress • reports • Key informants • (national, provincial, • district)	• Document review • Interviews at the national, kabupaten /kota and community level

Research Question	Indicator	Data Source	Data Collection Method
	during which registers and/or reports were reviewed.		
Results			
• What were the results of the SOS strategy, as implemented in the five districts? • Did the number of outreach sessions to remote communities increase? • Did routine immunization coverage improve (based on service data) in targeted communities/districts? • Did coverage of other interventions (Vitamin A) increase? • Were there other unanticipated results?	• **Caregiver knowledge**. Proportion of caregivers who know of the SOS programme, and know 2 or more messages included as part of the SOS communications strategy • **SOS coverage**. 1. Percentage of HTR villages receiving at least 1 SOS services, visit per year, as a proportion of total HTR villages in the target area 2. Of HTR villages receiving at least 1 SOS services, visit per year, breakdown of those receiving 2, 3, 4 or more visits per year • **District monitoring**. Proportion of implementing districts using monitoring data to improve programme performance	• UNICEF progress reports • District health office plans, records and reports • MOH Administrative coverage data • Key informants	• Document review • Interviews at the district, health facility and community level • Record review at provincial, district and community level
Costs			
• What does it cost to introduce and implement SOS in remote areas? • What is the average cost per child for basic immunization and VAC across the districts? • What are the costs of the most successful approaches to reaching the hard to reach on a regular basis? • What approaches are cost prohibitive and should be	• **Budget**. Costed plan for SOS exists and is updated annually • **Expenditure**. Proportion of annual expenditures for SOS per population as a percentage of total average expenditure per population (and by intervention area, as appropriate) • **Balanced financial contributions**. Percentage of public	• UNICEF progress and financial reports • MOH Administrative coverage data • National, kabupaten/kota and kecamatan EPI budgets,	• Document review at provincial and district level • Development with EPI managers of budgets for possible expansion of SOS strategy

Annex 4

Research Question	Indicator	Data Source	Data Collection Method
abandoned?	sources (MOH, province, district) within the SOS total budget	financial records and reports • Key informants	
Strengths/weaknesses/lessons learned			
• What worked and what didn't work about the SOS design and implementation? • What are the different factors contributing to SOS success, where it is successful? • What are the factors that lead to its failure where it is not? • What are the challenges met and what are the lessons learned? (from the point of view of the implementers /beneficiaries /donors /evaluators)	Composites of the above: • **Acceptability**. Communication effectiveness and community satisfaction • **Effective programme management**. Planning and budgeting • **Quality**. Health worker competency and service reliability	• Progress reports • Implementers • Other key informants	• Document review • Interviews and focus groups at the national, kabupaten/kota and community level

Data collection
A data collection instrument has been drafted to address these various data sources, with separate formats prepared for each of the main administrative levels involved in the provision of SOS services, namely, the national, provincial, district, health centre, and community levels. For each of these source formats, the team will attempt to collect data under five design framework categories, namely:

- the design of SOS interventions;
- implementation of the strategy;
- results obtained to date;
- costs and financing; and
- strengths, weaknesses and lessons learned during the pilot introduction.

The draft data collection instrument is attached (Annex 3), with parallel English and Indonesian text provided throughout to facilitate field level interviews.

Time Frame
The overall time-frame for the evaluation as estimated in the Terms of Reference is a period of 3 to 4 months, and on this basis, JSI proposed an approximate schedule of activities within its proposal document, in order to achieve the given objectives (Annex 4).

Following the establishment of the evaluation team in Indonesia, a more detailed time frame has now been developed for Phase 2 activities, outlining the proposed schedule of field visits to each of the areas where the SOS has, or is, being implemented (Annex 5). In each case, the team proposes to visit the Provincial MOH offices on first arrival in the province concerned, and then following discussions with the responsible officials and with their approval, to proceed to the districts and facilities of implementation. This schedule remains within the overall time-frame originally proposed for the evaluation, and envisages completion of field work by, or shortly after, the end of October 2011.

Clearly, the field work will necessarily involve visits to isolated areas, where travel arrangements may not be exactly predictable in advance. It is therefore anticipated that a certain amount of flexibility may be required in the proposed schedule of field visits and that the team may need to adjust the times and dates shown in Annex 5 to suit local conditions.

The Evaluation Team
For conducting the evaluation, JSI has assembled a team of specialists with a range of appropriate skills and expertise, and it is planned that the team members will be located variously within Indonesia, and also at the JSI headquarters in the USA. The team will comprise the following members:

- Team Lead and Technical Coordinator – Gordon Larsen
- Immunization Senior Advisor – Robert Steinglass
- Associate Technical Officer (immunization and integrated community-based programming)– Katherine Farnsworth
- Senior Researcher (clinical field work and primary data collection) – Dr. Paul Manoempil
- Senior Researcher (Supply inputs, costing and finances) – Dr. Bimo

CVs for each team member are available upon request.

Submission
This proposed Evaluation Design Framework is submitted to UNICEF and the EPI reference group for review and approval before the team moves into the proposed Phase 2 of the evaluation.

The JSI Evaluation Team
23 September 2011

List of annexes

1. John Snow, Inc., 1616 North Fort Myer Drive, Arlington, Virginia 22209, USA www.JSI.com
2. UNITED NATIONS CHILDREN'S FUND - Terms of Reference for Evaluation of Sustained Outreach Services (SOS) for Immunization/Vitamin A; UNICEF Indonesia; (undated)
3. Draft data collection instrument, 20 Sept 2011 – (*in English and Bahasa Indonesia)*
4. Approximate Schedule of Activities – SOS Evaluation
5. Proposed schedule of field visits to SOS implementation areas

PARAMETERS

Level		Tingkat	
1	National	1	Nasional
2	Provincial	2	Propinsi
3	District/City	3	Kabupaten/Kota
4	HCs	4	Puskesmas
5	Community	5	Masyarakat

Source							Sumber	
MOH	**UNICEF**	**WHO**	**Donors**	**NGO's**	**PH managers**	**Health Workers**	**Community**	**Parents**
KemKes	**UNICEF**	**WHO**	**Donor**	**LSM**	**PH managers**	**Tenaga kesehata**	**Masyarakat**	**Orang tua**

Area		Wilayah Area
A	Design	Desain
B	Implementation	Pelaksanaan
C	Results	Hasil
D	Costs	Biaya
E	S/W/Lessons	Kekuatan/Kelemahan/ Pembelajaran

Likely Scope of Qualitative Interviews
/ Kemungkinan Cakupan Wawancara Kualitatif

	MOH	UNICEF	WHO	Donors	NGO's	PH managers	Health Workers	Community	Parents
	Kemkes	UNICEF	WHO	Donor	LSM	PH managers	Nakes	Masyarakat	Orang tua
1	**National / Nasional**								
A	X	X	X	X		X ?			
B	X	X	X	X		X ?			
C	X	X	X	X		X ?			
D	X	X	X	X		X ?			
E	X	X	X	X		X ?			
2	**Provincial / Propinsi**	**(3 target provinces only) / (3 propinsi sasaran saja)**							
A	X ?					X			
B	X ?					X			
C	X ?					X			
D	X ?					X			
E	X ?					X			
3	**District/City / Kabupaten/Kota**								
A	X	X	X		X	X			
B	X	X	X		X	X			
C	X	X	X		X	X			
D	X	X	X		X	X			
E	X	X	X		X	X			
4	**Health facility / Puskesmas**								
A									
B	X					X	X		
C	X					X	X		
D									
E	X					X	X		
5	**Community / Masyarakat**								
A									
B								X	X
C								X	X
D									
E								X	X

Annex 6

Instruments

Qualitative Interviews - about the Interviewee:
Wawancara kualitatif - tentang orang yang diwawancara :

Interviewee's full name & title ?
Nama lengkap & Gelar ?
(i.e., Dr, Dra, Mr, Mrs, Ms)
(misal Dr, Dra, Bapak, Ibu, Nona)

Position & Job Title ?
Posisi & Jabatan

Office /Agency /Organisation ?
Kantor/Badan/Organisasi?

Province/district/Health Centre /community ?
Propinsi /Kabupaten /Puskesmas/ Masyarakat?

How long in this position ?
Berapa lama di posisi ini?

Worked in this position when SOS project began (ie, in 2009) ?
Telah bekerja di posisi ini sejak program SOS mulai (Mis. Tahun 2009) ?

If no, in what position at that time ?
Jika tidak, anda ada pada posisi apa pada saat itu ?

How long have you worked with this Office /Agency /Organisation ?
Sudah berapa lama anda bekerja dengan Kantor/Badan/Organisasi ini ?

Contact Information ?
No yang dapat dihubungi?

Request a current business card
Mintalah kartu nama

Ask interviewee the following questions:
Ajukan pertanyaan berikut kepada yang diwawancara:

1. In your view, what are the main challenges facing the health services at present ?
Menurut pendapat anda, apa tantangan utama yang dihadapi puskesmas saat ini?
   A
   B
   C

2. When and why did you start working in this position ?
Kapan dan mengapa anda mulai bekerja di posisi ini?
   A
   B
   C

3 What changes, if any, do you think the SOS project has brought to health services ?
Perubahan apa, jika ada, yang menurut anda terjadi di puskesmas karena adanya program SOS

A
B
C

4 What do you think would happen if the SOS project ceased to exist?
Apa yang menurut Anda akan terjadi jika program SOS dilanjutkan?

A
B
C

1 National
Nasional

A	**Design** ***Desain***
A.1	What were objectives & characteristics of the strategy ? *Apa sasaran & karakteristik dari strategi ini?* 1 2 3
A.2	Are there any differences compared to the original WHO strategy ? *Apakah ada perbedaan dibandingkan dengan strategi WHO asli?* 1 2 3
A.3	Who was involved in the SOS programme design ? *Siapa yang terlibat dalam mendesain program SOS?*
A.4	How & why were the Project areas chosen ? *Bagaimana & apa alasan pemilihan daerah program?*
A.5	What was the 'package' of interventions selected for SOS: *Apa 'paket' intervensi yang dipilih untuk SOS:* EPI ? Bednets ? Malaria prevention ? *Kelambu* *Pencegahan malaria ?* VAC ? RDT ? Others ? ANC - IFA? TT? *lain-lain* *ANC- asam folat zat besi ?*
A.6	What were assumptions made in the design ? *Asumsi apa saja yang ditetapkan dalam desain?* 1 2 3
A.7	How was 'success' of the SOS to be defined ? *Bagaimana mendefinisikan 'keberhasilan' SOS?*
B	**Implementation** ***Pelaksanaan***
B.1	How was the SOS strategy introduced *Bagaimana strategi SOS diperkenalkan?* 1 Was a SOS background & strategy document prepared ? *Apakah dokumen latar belakang & strategi SOS dipersiapkan terlebih dahulu?* 2 Was an SOS introduction plan prepared ? *Apakah rencana memperkenalkan SOS disusun terlebih dahulu?* 3 Was a National /Provincial /District planning meeting held ? *Apakah diadakan pertemuan rencana Nasional/Propinsi/Kabupaten?* 4 Was any SOS training /briefing conducted ? *Apakah diselenggarakan pelatihan /briefing tentang SOS terlebih dahulu?*
B.2	Who was responsible for SOS introduction ? *Siapa yang bertanggung jawab untuk memperkenalkan SOS ?*
B.3	Was SOS introduced into the target areas according to plan ? *Apakah SOS diperkenalkan ke daerah sasaran sesuai rencana?*
B.4	Was SOS introduced uniformly into all target areas ? *Apakah SOS diperkenalkan secara seragam ke seluruh daerah sasaran?*
B.5	Or were there variations in the strategy and /or the 'package' from place to place ? *Atau adakah variasi/perbedaan dalam strategi dan/atau 'paket' dari satu daerah dengan daerah yang lain?*
B.6	If any changes were made locally, who was authorised to decide on these ? *Jika ada perubahan yang dibuat secara lokal, siapakah yang berwenang untuk memutuskan hal tersebut ?*

B.7	Do you consider any changes to the strategy are still needed ? *Apakah Anda mempertimbangkan masih adanya kebutuhan untuk melakukan perubahan strategi ? Apa saja?* 1 2
B.8	What are the reasons for such changes ? *Apa alasan untuk melakukan perubahan tersebut ?* 1 2
B.9	Were any difficulties encountered during introduction of SOS ? *Apa saja kesulitan yang dihadapi dalam memperkenalkan SOS ?* 1 2
B.10	Were there any delays in introduction ? *Apakah ada penundaan dalam memperkenalkan SOS?*
C	**Results** ***Hasil***
C.1	What are the results of the SOS programme in target areas ? *Apa saja hasil program SOS di daerah sasaran?* 1 Good /better than expected ? *Baik/lebih baik dari yang diharapkan?* 2 Not good /less than expected ? *Tidak baik/kurang dari yang diharapkan?* 3 No great changes seen ? *Tidak terlihat adanya perubahan besar?*
C.2	Has Provincial /District Imm Coverage increased with SOS ? / decreased ? / little change ? *Apakah Cakupan Imunisasi Propinsi / Kabupaten meningkat / Menurun? / sedikit berubah dengan adanya SOS?*
C.3	Have access to other Provincial /District services improved with SOS ? / declined ? / little change ? *Apakah akses terhadap pelayanan Propinsi/Kabupaten lainnya meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.4	Have quality of services increased with SOS ? / decreased ? / little change ? *Apakah kualitas pelayanan meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.5	Has the range of services increased with SOS ? / decreased ? / little change ? *Apakah rangkaian pelayanan yang diberikan meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.6	How many outreach sessions per month /year were held in this Province /District before SOS ? *Berapa kali kunjungan ke daerah sulit per bulan/tahun yang dilakukan oleh propinsi/kabupaten ini sebelum adanya SOS?*
C.7	How many outreach session /month by Province /District are held now ? *Berapa banyak kunjungan ke daerah sulit /bulan yang diadakan oleh Propinsi / Kabupaten sekarang?*
C.8	How many new HTR communities /villages are now served by the SOS programme ? *Berapa banyak masyarakat/desa daerah sulit baru yang sekarang dicakup oleh program SOS?*
C.9	How many HTR communities /villages are not yet served by the SOS programme ? *Berapa banyak masyarakat/desa daerah sulit yang belum dicakup oleh program SOS?*
C.10	How many EPI /Vit A target children were reached before the introduction of SOS ? *Berapa banyak anak-anak sasaran EPI / Vit A yang tercakup sebelum SOS diperkenalkan?*
C.11	How many are reached now, following introduction of SOS ? *Berapa banyak yang tercakup sekarang, setelah SOS diperkenalkan?*
C.12	Were there any problems or difficulties with the introduction of SOS ? *Apakah ada masalah atau kesulitan dengan diperkenalkannya SOS?* 1 2
C.13	Were there any unexpected /unplanned results ? *Apakah ada hasil yang diluar harapan / tidak ada dalam rencana?* 1 2

C.14	What were the impacts on other, non-SOS related services ? *Apa dampak terhadap pelayanan non-SOS terkait lainnya?* 1 2
D	**Costs** ***Biaya***
D.1	What additional budgets were required for implementing SOS: *Anggaran tambahan apa saja yang didapatkan untuk pelaksanaan SOS pada tahun anggaran:* 2009 2010 2011 1 from MOH Central ? *Dari Kemkes Pusat?* 2 From Unicef ? *dari Unicef ?* 3 From Donor? *dari Donor ?* 4 From other sources? *dari sumber yang lain ?*
D.2	What were average costs per FIC before introduction of SOS ?: *Berapa biaya rata-rata per FIC sebelum SOS diperkenalkan?:*
D.3	What are average costs per FIC in areas with introduction of SOS ?: *Berapa biaya rata-rata per FIC di daerah dengan diperkenalkannya SOS?:*
D.4	What additional staff were required for implementing SOS: *Staff tambahan apa yang diperlukan untuk melaksanakan SOS:* 1 Health Workers ? *Tenaga Kesehatan ?* 2 Malaria workers ? *Petugas yang menangani Malaria ?* 3 Nutrition workers ? *Petugas Gizi ?* 4 Driver? *Supir ?* 5 Others? *Lainnya ?*
D.5	What other non-financial resources were required for implementing SOS: *Sumber non keuangan lain apakah yang diperlukan untuk pelaksanaan SOS:* 1 extra vaccines & Vit A ? *Tambahan vaksin & Vit A?* 2 extra drugs & medicines ? *Tambahan obat-obatan?* 3 extra bednets ? *Tambahan kelambu?* 4 extra vehicles & fuel ? *Tambahan kendaraan & bahan bakar?* 5 extra cold boxes ? *Tambahan kotak pendingin?*
D.6	What are the once-only, start-up costs for introduction of SOS ?: *Biaya apa yang hanya dikeluarkan sekali pada saat awal memperkenalkan SOS?:*
D.7	What are the regular, on-going costs compared to regular costs in non-SOS areas ?: *Biaya apa yang dikeluarkan secara berkala, terus menerus dibandingkan dengan biaya rutin di daerah non-SOS ?:*
D.8	What are costs of the most successful approaches to reach HTR areas ? *Berapa biaya yang dikeluarkan untuk melakukan pendekatan yang paling berhasil untuk menjangkau daerah sulit?*
D.9	What approaches are too expensive and should not be used for HTR areas ? *Pendekatan apa yang terlalu mahal dan seharusnya tidak digunakan untuk daerah sulit?*
D.10	Is the SOS strategy affordable: *Apakah strategi SOS terjangkau:* 1 with Government funds alone ? *dengan dana Pemerintah saja?* 2 with Government funds plus additional support from donors ? *dengan dana Pemerintah ditambah dukungan tambahan dari donor?*
D.11	Is the SOS strategy sustainable in the long term ?: *Apakah strategi SOS dapat berkesinambungan untuk jangka panjang?:*

D.12	Is the SOS strategy good use of funds & resources, or might another approach work better ? *Apakah strategi SOS merupakan cara pemanfaatan dana & sumber daya yang baik, atau mungkin pendekatan lain lebih baik?*
D.13	Does SOS divert funds and resources from other services ? *Apakah SOS mengalihkan dana dan sumber daya dari pelayanan lain?*
D.14	Could SOS be introduced onto other remote and /or HTR areas ? *Apakah SOS dapat diperkenalkan ke daerah terpencil dan / atau sulit lainnya?*
D.15	If yes, what other resources would be needed ? *Jika ya, apa saja sumber daya lain yang diperlukan?*
D.16	What additional vaccines were needed for introduction of SOS ? *Tambahan vaksin apa saja yang diperlukan untuk memperkenalkan SOS ?*

	pre-SOS *pra SOS*	post-SOS *pasca SOS*
1	BCG	
2	Polio	
3	DPT /Hep B	
4	Measles *Campak*	

E	**Strengths /Weaknesses /Lessons Learned** ***Kekuatan/kelemahan/ Pembelajaran***
E.1	What worked well during the introduction of SOS ? *Apa saja yang berjalan dengan baik selama memperkenalkan SOS ?* 1 2 3
E.2	What did not work so well during the introduction of SOS ? *Apa saja yang tidak berlangsung dengan baik selama memperkenalkan SOS ?* 1 2 3

E.3	What are important points that help towards success of SOS ? *Hal penting apa saja yang membantu berhasilnya program SOS?* 1 2
E.4	What are important points in order to avoid problems and /or failure ? *Hal penting apa saja yang diperlukan untuk menghindari masalah dan/atau kegagalan?* 1 2
E.5	What main challenges were encountered during the introduction of SOS ? *apa saja antangan utama yang dihadapi selama memperkenalkan SOS ?* 1 2
E.6	What key factors helped with the introduction of SOS ? *Apa saja faktor kunci yang membantu selama memperkenalkan SOS?* 1 2
E.7	What main lessons were learned during the introduction of SOS ? *Apa saja pembelajaran utama yang didapat selama memperkenalkan SOS?* 1 2
E.8	Should /could SOS be expanded into other areas /Districts /Provinces ? *Apakah SOS seharusnya/dapat diperluas ke daerah / Kabupaten / Propinsi lain ?*
E.9	If yes, what if anything, should be done differently: *Jika ya, apa yang seharusnya dilakukan secara berbeda:* 1 to improve the SOS strategy ? *untuk meningkatkan strategi SOS ?* 2 to increase the impact of SOS ?

	untuk mempertinggi dampak SOS ? 3 to reduce costs ? *untuk mengurangi biaya ?* 4 to reach more children in HTR areas ? *untuk mencakup lebih banyak anak di daerah sulit?* 5 other ? *lainnya ?*
E.10	Are there other key stakeholders that should be interviewed about SOS ? *Adakah pemangku kepentingan kunci lain yang harus diwawancarai tentang SOS?* 1 2 3
E.11	Any other comments interviewee would like to add ? *Komentar lain yang ingin anda tambahkan?*

2 Province
Propinsi

A	**Design** ***Desain***
A.1	What were objectives & characteristics of the strategy ? *Apa sasaran & karakteristik dari strategi ini?* 1 2 3
A.2	Are there any differences compared to the original WHO strategy ? *Apakah ada perbedaan dibandingkan dengan strategi WHO asli?* 1 2 3
A.3	Who was involved in the SOS programme design ? *Siapa yang terlibat dalam mendesain program SOS?*
A.4	How & why were the Project areas chosen ? *Bagaimana & apa alasan pemilihan daerah program?*
A.5	What was the 'package' of interventions selected for SOS in this province : *Apa 'paket' intervensi yang dipilih untuk SOS di propinsi ini :* EPI ? Bednets ? Malaria prevention ? *Kelambu Pencegahan malaria ?* VAC ? RDT ? others ? ANC- IFA ? TT ? *lain-lain* *(ANC - asam folat/zat besi)*
A.6	What were assumptions made in the design ? *Asumsi apa saja yang ditetapkan dalam desain?* 1 2 3
A.7	How was 'success' of the SOS to be defined ? *Bagaimana mendefinisikan 'keberhasilan' SOS?*
A.8	Have similar strategies been used before in this province ? - eg, puskesmas keliling, etc *Apakah strategi yang serupa telah digunakan sebelumnya di propinsi ini ? - misal puskesmas keliling dll.*
A.9	If yes, by whom was it introduced > *Jika ya, pihak mana yang memperkenalkannya >*
B	**Implementation** ***Pelaksanaan***
B.1	How was the SOS strategy introduced *Bagaimana strategi SOS diperkenalkan?* 1 Was a SOS background & strategy document prepared ? *Apakah dokumen latar belakang & strategi SOS dipersiapkan terlebih dahulu?* 2 Was an SOS introduction plan prepared ? *Apakah rencana memperkenalkan SOS disusun terlebih dahulu?* 3 Was a National /Provincial /District planning meeting held ? *Apakah diadakan pertemuan rencana Nasional/Propinsi/Kabupaten?* 4 Was any SOS training /briefing conducted ? *Apakah diselenggarakan pelatihan /briefing tentang SOS terlebih dahulu?*
B.2	Who was responsible for SOS introduction ? *Siapa yang bertanggung jawab untuk memperkenalkan SOS ?*
B.3	Was SOS introduced into the target areas according to plan ? *Apakah SOS diperkenalkan ke daerah sasaran sesuai rencana?*

B.4	When was the first SOS round conducted in this District /City ? *Kapan kunjungan pertama SOS dilakukan di kabupaten/kota ini?*
B.5	How many SOS rounds have now been conducted in this District /City : *Berapa kali kunjungan SOS yang saat ini sudah dilakukan di kabupaten/kota ini?* in 2009 ? in 2010 ? in 2011 ? *tahun 2009? tahun 2010? tahun 2011?*
B.6	Which services were provided during each of these SOS rounds ? *Pelayanan apa yang diberikan pada masing-masing kunjungan SOS?* in 2009 ? in 2010 ? in 2011 ? *tahun 2009? tahun 2910? tahun 2011?* EPI ? VAC ? ANC- IFA ? *ANC - asam folat/zat besi* TT ? Bednets ? *Kelambu?* RDT ? *Tes diagnostik cepat?* Malaria prev ? *Pencegahan malaria?* others ? *lain-lain*
B.7	How many health staff are usually included in the SOS team ? *Berapa orang petugas kesehatan yang biasanya termasuk dalam tim SOS?*
B.8	How does the SOS team usually travel: *Bagaimana biasanya cara tim SOS melakukan perjalanan tugas?* by vehicle ? by boat ? on foot ? Other? *Naik mobil? naik kapal? berjalan kaki? cara lain?*
B.9	Was SOS introduced uniformly into all target areas ? *Apakah SOS diperkenalkan secara seragam ke seluruh daerah sasaran?*
B.10	Or were there variations in the strategy and /or the 'package' from place to place ? *Atau adakah variasi/perbedaan dalam strategi dan/atau 'paket' dari satu daerah dengan daerah yang lain?*
B.11	If any changes were made locally, who was authorised to decide on these ? *Jika ada perubahan yang dibuat secara lokal, siapakah yang berwenang untuk memutuskan hal tersebut ?*
B.12	Do you consider any changes to the strategy are still needed ? *Apakah Anda mempertimbangkan masih adanya kebutuhan untuk melakukan perubahan strategi ? Apa saja?* 1 2
B.13	What are the reasons for such changes ? *Apa alasan untuk melakukan perubahan tersebut ?* 1 2
B.14	Were any difficulties encountered during introduction of SOS ? *Apa saja kesulitan yang dihadapi dalam memperkenalkan SOS ?* 1 2
B.15	Were there any delays in introduction ? *Apakah ada penundaan dalam memperkenalkan SOS?*
C	**Results** ***Hasil***
C.1	What are the results of the SOS programme in target areas ? *Apa saja hasil program SOS di daerah sasaran?* 1 Good /better than expected ? *Baik/lebih baik dari yang diharapkan?* 2 Not good /less than expected ? *Tidak baik/kurang dari yang diharapkan?* 3 No great changes seen ? *Tidak terlihat adanya perubahan besar?*

C.2	Has Provincial /District Imm Coverage increased with SOS ? / decreased ? / little change ? *Apakah Cakupan Imunisasi Propinsi / Kabupaten meningkat / Menurun? / sedikit berubah dengan adanya SOS?*
C.3	Have access to other Provincial /District services improved with SOS ? / declined ? / little change ? *Apakah akses terhadap pelayanan Propinsi/Kabupaten lainnya meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.4	Have quality of services increased with SOS ? / decreased ? / little change ? *Apakah kualitas pelayanan meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.5	Has the range of services increased with SOS ? / decreased ? / little change ? *Apakah rangkaian pelayanan yang diberikan meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.6	How many outreach sessions per month /year were held in this Province /District before SOS ? *Berapa kali kunjungan ke daerah sulit per bulan/tahun yang dilakukan oleh propinsi/kabupaten ini sebelum adanya SOS?*
C.7	How many outreach sessions per month /year are held in this Province /District now ? *Berapa siklus kunjungan ke daerah sulit per bulan/tahun yang dilakukan oleh propinsi/kabupaten ini sekarang?*
C.8	How many HTR communities /villages in this Province and numbers by District ? *Berapa banyak masyarakat/desa daerah sulit di propinsi ini dan jumlahnya per Kabupaten ?*
C.9	How many HTR communities /villages by district are now served by the SOS programme ? *Berapa banyak masyarakat/desa daerah sulit per kabupaten yang sekarang dicakup oleh program SOS?*
C.10	How many HTR communities /villages are not yet served by the SOS programme ? *Berapa banyak masyarakat/desa daerah sulit yang belum dicakup oleh program SOS?*
C.11	How many EPI /Vit A target children were reached before the introduction of SOS ? *Berapa banyak anak-anak sasaran EPI / Vit A yang tercakup sebelum SOS diperkenalkan?*
C.12	How many are reached now, following introduction of SOS ? *Berapa banyak yang tercakup sekarang, setelah SOS diperkenalkan?*
C.13	Were there any problems or difficulties with the introduction of SOS ? *Apakah ada masalah atau kesulitan dengan diperkenalkannya SOS?* 1 2
C.14	Were there any unexpected /unplanned results ? *Apakah ada hasil yang diluar harapan / tidak ada dalam rencana?* 1 2
C.15	What were the impacts on other, non-SOS related services ? *Apa dampak terhadap pelayanan non-SOS terkait lainnya?* 1 2
D	**Costs** ***Biaya***
D.1	What additional budgets were provided for implementing SOS in: *Anggaran tambahan apa saja yang didapatkan untuk pelaksanaan SOS pada tahun anggaran:* 2009 2010 2011 1 from MOH Central ? *Dari Kemkes Pusat?* 2 from MOH Provincial ? *Dari Dinas Kesehatan Propinsi?* 3 from Unicef ? *Dari Unicef?* 4 from other Donors ? *Dari donor lain?* 5 from other sources ? *Dari sumber lain?*

D.2	What resources /types of input were provided in: *Sumber/jenis masukan apa saja yang diberikan pada tahun* 2009 2010 2011 1 by Bupati ? *oleh Bupati?* 2 by PKM ? *Oleh Puskesmas?* 3 by community ? *Oleh Masyarakat?* 4 from other sources ? *Dari sumber lain?*
D.3	What were average costs per FIC before introduction of SOS ?: *Berapa biaya rata-rata per FIC sebelum SOS diperkenalkan?:*
D.4	What are average costs per FIC in areas with introduction of SOS ?: *Berapa biaya rata-rata per FIC di daerah dengan diperkenalkannya SOS?:*
D.5	What additional staff were required for implementing SOS: *Staff tambahan apa yang diperlukan untuk melaksanakan SOS:* 1 Health Workers ? *Tenaga Kesehatan ?* 2 Malaria workers ? *Petugas yang menangani Malaria ?* 3 Nutrition workers ? *Petugas Gizi ?* 4 Drivers ? *Supir ?* 5 Others ? *Lainnya ?*
D.6	What other non-financial resources were required for implementing SOS: *Sumber non keuangan lain apakah yang diperlukan untuk pelaksanaan SOS:* 1 extra vaccines & Vit A ? *Tambahan vaksin & Vit A?* 2 extra drugs & medicines ? *Tambahan obat-obatan?* 3 extra bednets ? *Tambahan kelambu?* 4 extra vehicles & fuel ? *Tambahan kendaraan & bahan bakar?* 5 extra cold boxes ? *Tambahan kotak pendingin?*
D.7	What are the once-only, start-up costs for introduction of SOS ?: *Biaya apa yang hanya dikeluarkan sekali pada saat awal memperkenalkan SOS?:*
D.8	What are the regular, on-going costs compared to regular costs in non-SOS areas ?: *Biaya apa yang dikeluarkan secara berkala, terus menerus dibandingkan dengan biaya rutin di daerah non-SOS ?:*
D.9	What are costs of the most successful approaches to reach HTR areas ? *Berapa biaya yang dikeluarkan untuk melakukan pendekatan yang paling berhasil untuk menjangkau daerah sulit?*
D.10	What approaches are too expensive and should not be used for HTR areas ? *Pendekatan apa yang terlalu mahal dan seharusnya tidak digunakan untuk daerah sulit?*
D.11	Is the SOS strategy affordable: *Apakah strategi SOS terjangkau:* 1 with Government funds alone ? *dengan dana Pemerintah saja?* 2 with Government funds plus additional support from donors ? *dengan dana Pemerintah ditambah dukungan tambahan dari donor?*
D.12	Is the SOS strategy sustainable in the long term ?: *Apakah strategi SOS dapat berkesinambungan untuk jangka panjang?:*
D.13	Is the SOS strategy good use of funds & resources, or might another approach work better ? *Apakah strategi SOS merupakan cara pemanfaatan dana & sumber daya yang baik, atau mungkin pendekatan lain lebih baik?*
D.14	Does SOS divert funds and resources from other services ? *Apakah SOS mengalihkan dana dan sumber daya dari pelayanan lain?*
D.15	Could SOS be introduced onto other remote and /or HTR areas ? *Apakah SOS dapat diperkenalkan ke daerah terpencil dan / atau sulit lainnya?*

D.16	If yes, what other resources would be needed ? *Jika ya, apa saja sumber daya lain yang diperlukan?*
D.17	What additional vaccines were needed for introduction of SOS ? *Tambahan vaksin apa saja yang diperlukan untuk memperkenalkan SOS ?* pre-SOS / *pra SOS* — post-SOS / *pasca SOS* 1 BCG 2 Polio 3 DPT /Hep B 4 Measles *Campak*
E	**Strengths /Weaknesses /Lessons Learned** ***Kekuatan/kelemahan/ Pembelajaran***
E.1	What worked well during the introduction of SOS ? *Apa saja yang berjalan dengan baik selama memperkenalkan SOS ?* 1 2 3
E.2	What did not work so well during the introduction of SOS ? *Apa saja yang tidak berlangsung dengan baik selama memperkenalkan SOS ?* 1 2 3
E.3	What are important points that help towards success of SOS ? *Hal penting apa saja yang membantu berhasilnya program SOS?* 1 2
E.4	What are important points in order to avoid problems and /or failure ? *Hal penting apa saja yang diperlukan untuk menghindari masalah dan/atau kegagalan?* 1 2
E.5	What main challenges were encountered during the introduction of SOS ? *apa saja antangan utama yang dihadapi selama memperkenalkan SOS ?* 1 2
E.6	What key factors helped with the introduction of SOS ? *Apa saja faktor kunci yang membantu selama memperkenalkan SOS?* 1 2
E.7	What main lessons were learned during the introduction of SOS ? *Apa saja pembelajaran utama yang didapat selama memperkenalkan SOS?* 1 2
E.8	Should /could SOS be expanded into other areas /Districts /Provinces ? *Apakah SOS seharusnya/dapat diperluas ke daerah / Kabupaten / Propinsi lain ?*
E.9	If yes, what if anything, should be done differently: *Jika ya, apa yang seharusnya dilakukan secara berbeda:* 1 to improve the SOS strategy ? *untuk meningkatkan strategi SOS ?* 2 to increase the impact of SOS ? *untuk mempertinggi dampak SOS ?* 3 to reduce costs ? *untuk mengurangi biaya ?* 4 to reach more children in HTR areas ? *untuk mencakup lebih banyak anak di daerah sulit?* 5 other ? *lainnya ?*

E.10	Are there other key stakeholders that should be interviewed about SOS ? *Adakah pemangku kepentingan kunci lain yang harus diwawancarai tentang SOS?* 1 2 3
E.11	Any other comments interviewee would like to add ? *Komentar lain yang ingin anda tambahkan?*

3 District /City
Kabupaten/Kota

A	**Design** ***Desain***
A.1	What were objectives & characteristics of the strategy ? *Apa sasaran & karakteristik dari strategi ini?* 1 2 3
A.2	Are there any differences compared to the original WHO strategy ? *Apakah ada perbedaan dibandingkan dengan strategi WHO asli?* 1 2 3
A.3	Who was involved in the SOS programme design ? *Siapa yang terlibat dalam mendesain program SOS?*
A.4	How & why were the Project areas chosen ? *Bagaimana & apa alasan pemilihan daerah program?*
A.5	What was the 'package' of interventions selected for SOS in this District /City : *Paket intervensi apa saja yang dipilih untuk SOS di kabupaten/kota ini ?* EPI ? — Bednets ? — Malaria prevention ? *Kelambu* — *Pencegahan malaria ?* VAC ? — RDT ? — others ? ANC - IFA? — TT? — *lain-lain* *ANC- asam folat zat besi ?*
A.6	What were assumptions made in the design ? *Asumsi apa saja yang ditetapkan dalam desain?* 1 2 3
A.7	How was 'success' of the SOS to be defined ? *Bagaimana mendefinisikan 'keberhasilan' SOS?*
B	**Implementation** ***Pelaksanaan***
B.1	How was the SOS strategy introduced *Bagaimana strategi SOS diperkenalkan?* 1 Was a provincial /district /city planning meeting held ? *Apakah diadakan pertemuan perencanaan tingkat Propinsi/Kabupaten/kota?* 2 Was an SOS introduction plan prepared ? *Apakah rencana memperkenalkan SOS disusun terlebih dahulu?* 3 Was mapping carried out to identify HTR areas or communities ? *Apakah diadakan pemetaan untuk mengidentifikasi daerah atau masyarakat daerah sulit?* 4 Was any SOS training /briefing conducted ? *Apakah diselenggarakan pelatihan /briefing tentang SOS terlebih dahulu?*
B.2	Who was responsible for SOS introduction ? *Siapa yang bertanggung jawab untuk memperkenalkan SOS ?*
B.3	Was SOS introduced into the target areas according to plan ? *Apakah SOS diperkenalkan ke daerah sasaran sesuai rencana?*
B.4	When was the first SOS round conducted in this District /City ? *Kapan kunjungan pertama SOS dilakukan di kabupaten/kota ini?*
B.5	How many SOS rounds have now been conducted in this District /City : *Berapa kali kunjungan SOS yang saat ini sudah dilakukan di kabupaten/kota ini?* in 2009 ? — in 2010 ? — in 2011 ? *tahun 2009?* — *tahun 2010?* — *tahun 2011?*

B.6	Which services were provided during each of these SOS rounds ? *Pelayanan apa yang diberikan pada masing-masing kunjungan SOS?*			
		in 2009 ? *tahun 2009?*	in 2010 ? *tahun 2010?*	in 2011 ? *tahun 2011?*
	EPI ?			
	VAC ?			
	ANC- IFA ? *ANC - asam folat/zat besi*			
	TT ?			
	Bednets ? *Kelambu?*			
	RDT ? *Tes diagnostik cepat?*			
	Malaria prev ? *Pencegahan malaria?*			
	others ? *lain-lain*			
B.7	How many health staff are usually included in the SOS team ? *Berapa orang petugas kesehatan yang biasanya termasuk dalam tim SOS?*			
B.8	How does the SOS team usually travel: *Bagaimana biasanya cara tim SOS melakukan perjalanan tugas?*			
	by vehicle ? *Naik mobil?*	by boat ? *naik kapal?*	on foot ? *berjalan kaki?*	Other? *cara lain?*
B.9	Was SOS introduced uniformly into all target areas ? *Apakah SOS diperkenalkan secara seragam ke seluruh daerah sasaran?*			
B.10	Or were there variations in the strategy and /or the 'package' from place to place ? *Atau adakah variasi/perbedaan dalam strategi dan/atau 'paket' dari satu daerah dengan daerah yang lain?*			
B.11	If any changes were made locally, who was authorised to decide on these ? *Jika ada perubahan yang dibuat secara lokal, siapakah yang berwenang untuk memutuskan hal tersebut ?*			
B.12	Do you consider any changes to the strategy are still needed ? *Apakah Anda mempertimbangkan masih adanya kebutuhan untuk melakukan perubahan strategi ? Apa saja?* 1 2			
B.13	What are the reasons for such changes ? *Apa alasan untuk melakukan perubahan tersebut ?* 1 2			
B.14	Were any difficulties encountered during introduction of SOS ? *Apa saja kesulitan yang dihadapi dalam memperkenalkan SOS ?* 1 2			
B.15	Were there any delays in introduction ? *Apakah ada penundaan dalam memperkenalkan SOS?*			
C	**Results** ***Hasil***			
C.1	What are the results of the SOS programme in target areas ? *Apa saja hasil program SOS di daerah sasaran?* 1 Good /better than expected ? *Baik/lebih baik dari yang diharapkan?* 2 Not good /less than expected ? *Tidak baik/kurang dari yang diharapkan?* 3 No great changes seen ? *Tidak terlihat adanya perubahan besar?*			
C.2	Has Provincial /District Imm Coverage increased with SOS ? / decreased ? / little change ? *Apakah Cakupan Imunisasi Propinsi / Kabupaten meningkat / Menurun? / sedikit berubah dengan adanya SOS?*			
C.3	Have access to other Provincial /District services improved with SOS ? / declined ? / little change ? *Apakah akses terhadap pelayanan Propinsi/Kabupaten lainnya meningkat / menurun / sedikit berubah dengan adanya SOS?*			

C.4	Have quality of services increased with SOS ? / decreased ? / little change ? *Apakah kualitas pelayanan meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.5	Has the range of services increased with SOS ? / decreased ? / little change ? *Apakah rangkaian pelayanan yang diberikan meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.6	How many outreach sessions per month /year were held in this Province /District before SOS ? *Berapa kali kunjungan ke daerah sulit per bulan/tahun yang dilakukan oleh propinsi/kabupaten ini sebelum adanya SOS?*
C.7	How many outreach sessions per month /year by District are held now ? *Berapa banyak kunjungan ke daerah sulit per bulan/tahun yang diadakan oleh Kabupaten sekarang?*
C.8	How many HTR communities /villages are there in this District ? *Berapa banyak masyarakat/desa daerah sulit yang terdapat di kabupaten ini ?*
C.9	How many new HTR communities /villages are now served by the SOS programme ? *Berapa banyak masyarakat/desa daerah sulit baru yang sekarang dicakup oleh program SOS?*
C.10	How many HTR communities /villages are not yet served by the SOS programme ? *Berapa banyak masyarakat/desa daerah sulit yang belum dicakup oleh program SOS?*
C.11	How many EPI /Vit A target children were reached before the introduction of SOS ? *Berapa banyak anak-anak sasaran EPI / Vit A yang tercakup sebelum SOS diperkenalkan?*
C.12	How many are reached now, following introduction of SOS ? *Berapa banyak yang tercakup sekarang, setelah SOS diperkenalkan?*
C.13	Were there any problems or difficulties with the introduction of SOS ? *Apakah ada masalah atau kesulitan dengan diperkenalkannya SOS?* 1 2
C.14	Were there any unexpected /unplanned results ? *Apakah ada hasil yang diluar harapan / tidak ada dalam rencana?* 1 2
C.15	What were the impacts on other, non-SOS related services ? *Apa dampak terhadap pelayanan non-SOS terkait lainnya?* 1 2
D	**Costs** ***Biaya***
D.1	What additional budgets were provided for implementing SOS in: *Anggaran tambahan apa saja yang didapatkan untuk pelaksanaan SOS pada tahun anggaran:* 2009 2010 2011 1 from MOH Central ? *Dari Kemkes Pusat?* 2 from MOH Provincial ? *Dari Dinas Kesehatan Propinsi?* 3 from Unicef ? *Dari Unicef?* 4 from other Donors ? *Dari donor lain?* 5 from other sources ? *Dari sumber lain?*
D.2	What resources /types of input were provided in: *Sumber/jenis masukan apa saja yang diberikan pada tahun* 2009 2010 2011 1 by Bupati ? *oleh Bupati?* 2 by the Health centre ? *Oleh Puskesmas?* 3 by community ? *Oleh Masyarakat?* 4 from other sources ? *Dari sumber lain?*
D.3	What were average costs per FIC before introduction of SOS ?: *Berapa biaya rata-rata per FIC sebelum SOS diperkenalkan?:*

D.4	What are average costs per FIC in areas with introduction of SOS ?: *Berapa biaya rata-rata per FIC di daerah dengan diperkenalkannya SOS?:*
D.5	What additional staff were required for implementing SOS: *Staff tambahan apa yang diperlukan untuk melaksanakan SOS:* 1 Health Workers ? *Tenaga Kesehatan ?* 2 Malaria workers ? *Petugas yang menangani Malaria ?* 3 Nutrition workers ? *Petugas Gizi ?* 4 Drivers ? *Supir ?* 5 Others ? *Lainnya ?*
D.6	What other non-financial resources were required for implementing SOS: *Sumber non keuangan lain apakah yang diperlukan untuk pelaksanaan SOS:* 1 extra vaccines & Vit A ? *Tambahan vaksin & Vit A?* 2 extra drugs & medicines ? *Tambahan obat-obatan?* 3 extra bednets ? *Tambahan kelambu?* 4 extra vehicles & fuel ? *Tambahan kendaraan & bahan bakar?* 5 extra cold boxes ? *Tambahan kotak pendingin?*
D.7	What are the once-only, start-up costs for introduction of SOS ?: *Biaya apa yang hanya dikeluarkan sekali pada saat awal memperkenalkan SOS?:*
D.8	What are the regular, on-going costs compared to regular costs in non-SOS areas ?: *Biaya apa yang dikeluarkan secara berkala, terus menerus dibandingkan dengan biaya rutin di daerah non-SOS ?:*
D.9	What are costs of the most successful approaches to reach HTR areas ? *Berapa biaya yang dikeluarkan untuk melakukan pendekatan yang paling berhasil untuk menjangkau daerah sulit?*
D.10	What approaches are too expensive and should not be used for HTR areas ? *Pendekatan apa yang terlalu mahal dan seharusnya tidak digunakan untuk daerah sulit?*
D.11	Is the SOS strategy affordable: *Apakah strategi SOS terjangkau:* 1 with Government funds alone ? *dengan dana Pemerintah saja?* 2 with Government funds plus additional support from donors ? *dengan dana Pemerintah ditambah dukungan tambahan dari donor?*
D.12	Is the SOS strategy sustainable in the long term ?: *Apakah strategi SOS dapat berkesinambungan untuk jangka panjang?:*
D.13	Is the SOS strategy good use of funds & resources, or might another approach work better ? *Apakah strategi SOS merupakan cara pemanfaatan dana & sumber daya yang baik, atau mungkin pendekatan lain lebih baik?*
D.14	Does SOS divert funds and resources from other services ? *Apakah SOS mengalihkan dana dan sumber daya dari pelayanan lain?*
D.15	Could SOS be introduced onto other remote and /or HTR areas ? *Apakah SOS dapat diperkenalkan ke daerah terpencil dan / atau daerah sulit lainnya?*
D.16	If yes, what other resources would be needed ? *Jika ya, apa saja sumber daya lain yang diperlukan?*
D.17	What additional vaccines were needed for introduction of SOS ? *Tambahan vaksin apa saja yang diperlukan untuk memperkenalkan SOS ?* pre-SOS *pra SOS* / post-SOS *pasca SOS* 1 BCG 2 Polio 3 DPT /Hep B 4 Measles *Campak*

E	**Strengths /Weaknesses /Lessons Learned** ***Kekuatan/kelemahan/ Pembelajaran***
E.1	What worked well during the introduction of SOS ? *Apa saja yang berjalan dengan baik selama memperkenalkan SOS ?* 1 2 3
E.2	What did not work so well during the introduction of SOS ? *Apa saja yang tidak berlangsung dengan baik selama memperkenalkan SOS ?* 1 2 3
E.3	What are important points that help towards success of SOS ? *Hal penting apa saja yang membantu berhasilnya program SOS?* 1 2
E.4	What are important points in order to avoid problems and /or failure ? *Hal penting apa saja yang diperlukan untuk menghindari masalah dan/atau kegagalan?* 1 2
E.5	What main challenges were encountered during the introduction of SOS ? *apa saja antangan utama yang dihadapi selama memperkenalkan SOS ?* 1 2
E.6	What key factors helped with the introduction of SOS ? *Apa saja faktor kunci yang membantu selama memperkenalkan SOS?* 1 2
E.7	What main lessons were learned during the introduction of SOS ? *Apa saja pembelajaran utama yang didapat selama memperkenalkan SOS?* 1 2
E.8	Should /could SOS be expanded into other areas /Districts /Provinces ? *Apakah SOS seharusnya/dapat diperluas ke daerah / Kabupaten / Propinsi lain ?*
E.9	If yes, what if anything, should be done differently: *Jika ya, apa yang seharusnya dilakukan secara berbeda:* 1 to improve the SOS strategy ? *untuk meningkatkan strategi SOS ?* 2 to increase the impact of SOS ? *untuk mempertinggi dampak SOS ?* 3 to reduce costs ? *untuk mengurangi biaya ?* 4 to reach more children in HTR areas ? *untuk mencakup lebih banyak anak di daerah sulit?* 5 other ? *lainnya ?*
E.10	Are there other key stakeholders that should be interviewed about SOS ? *Adakah pemangku kepentingan kunci lain yang harus diwawancarai tentang SOS?* 1 2 3
E.11	Any other comments interviewee would like to add ? *Komentar lain yang ingin anda tambahkan?*

4 Health Centres
Pusat Kesehatan Masyarakat

A	**Design** ***Desain***
A.5	What was the 'package' of interventions selected for SOS in your area: *Apa 'paket' intervensi yang dipilih untuk SOS di daerah anda:* EPI /Vit A ? — Bednets ? — Malaria prevention ? — *Kelambu* — *Pencegahan malaria ?* VAC ? — RDT ? — others ? ANC - IFA? — TT? — *lain-lain* *ANC- asam folat zat besi ?*
A.6	What other services might need to be added in the future ? *Pelayanan apakah yang mungkin perlu ditambahkan di masa yang akan datang ?* 1 2
B	**Implementation** ***Pelaksanaan***
B.1	How was the SOS strategy introduced *Bagaimana strategi SOS diperkenalkan?* 1 Was a district or local planning meeting held ? *Apakah diadakan pertemuan rencana Propinsi/Kabupaten/kota?* 2 Was an SOS introduction plan prepared ? *Apakah rencana memperkenalkan SOS disusun terlebih dahulu?* 3 Was mapping carried out to identify HTR areas or communities ? *Apakah diadakan pemetaan untuk mengidentifikasi daerah sulit atau masyarakat daerah sulit?* 4 Was any SOS training /briefing conducted ? *Apakah diselenggarakan pelatihan /briefing tentang SOS terlebih dahulu?*
B.2	Who was responsible for SOS introduction ? *Siapa yang bertanggung jawab untuk memperkenalkan SOS ?*
B.3	Was SOS introduced into the target areas according to plan ? *Apakah SOS diperkenalkan ke daerah sasaran sesuai rencana?*
B.4	When was the first SOS round conducted in this health area ? *Kapan kunjungan pertama SOS dilakukan di daerah kerja Puskesmas ini?*
B.5	How many SOS rounds have now been conducted in this health area : *Berapa kali kunjungan SOS yang saat ini sudah dilakukan di daerah kerja Puskesmas ini?* in 2009 ? — in 2010 ? — in 2011 ? *tahun 2009?* — *tahun 2010?* — *tahun 2011?*
B.6	Which services were provided during each of these SOS rounds ? *Pelayanan apa yang diberikan pada masing-masing kunjungan SOS?* in 2009 ? — in 2010 ? — in 2011 ? *tahun 2009?* — *tahun 2910?* — *tahun 2011?* EPI ? VAC ? ANC- IFA ? *ANC - asam folat/zat besi* TT ? Bednets ? *Kelambu?* RDT ? *Tes diagnostik cepat?* Malaria prev ? *Pencegahan malaria?* others ? *lain-lain*

B.7	How many health staff are usually included in the SOS team ? *Berapa orang petugas kesehatan yang biasanya termasuk dalam tim SOS?*
B.8	How does the SOS team usually travel: *Bagaimana biasanya cara tim SOS melakukan perjalanan tugas?* by vehicle ? / *Naik mobil?* — by boat ? / *naik kapal?* — on foot ? / *berjalan kaki?* — Other? / *cara lain?*
B.9	Was SOS introduced uniformly into all target areas ? *Apakah SOS diperkenalkan secara seragam ke seluruh daerah sasaran?*
B.10	Or were there variations in the strategy and /or the 'package' from place to place ? *Atau adakah variasi/perbedaan dalam strategi dan/atau 'paket' dari satu daerah dengan daerah yang lain?*
B.11	If any changes were made locally, who was authorised to decide on these ? *Jika ada perubahan yang dibuat secara lokal, siapakah yang berwenang untuk memutuskan hal tersebut ?*
B.12	Do you consider any changes to the strategy are still needed ? *Apakah Anda mempertimbangkan masih adanya kebutuhan untuk melakukan perubahan strategi ? Apa saja?* 1 2
B.13	What are the reasons for such changes ? *Apa alasan untuk melakukan perubahan tersebut ?* 1 2
B.14	Were any difficulties encountered during introduction of SOS ? *Apa saja kesulitan yang dihadapi dalam memperkenalkan SOS ?* 1 2
B.15	Were there any delays in introduction ? *Apakah ada penundaan dalam memperkenalkan SOS?*
C	**Results** ***Hasil***
C.1	What are the results of the SOS programme in target areas ? *Apa saja hasil program SOS di daerah sasaran?* 1 Good /better than expected ? *Baik/lebih baik dari yang diharapkan?* 2 Not good /less than expected ? *Tidak baik/kurang dari yang diharapkan?* 3 No great changes seen ? *Tidak terlihat adanya perubahan besar?*
C.2	Has local Imm Coverage increased with SOS ? / decreased ? / little change ? *Apakah Cakupan Imunisasi di daerah ini meningkat / Menurun? / sedikit berubah dengan adanya SOS?*
C.3	Have access to other local services improved with SOS ? / declined ? / little change ? *Apakah akses terhadap pelayanan lokal lainnya meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.4	Have quality of local services increased with SOS ? / decreased ? / little change ? *Apakah kualitas pelayanan meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.5	Has the range of services increased with SOS ? / decreased ? / little change ? *Apakah rangkaian pelayanan yang diberikan meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.6	How many outreach session /month were held in this health area before SOS ? *Berapa banyak kunjungan ke daerah sulit /bulan yang diadakan oleh Pusat Kesehatan sebelum SOS?*
C.7	How many outreach session /month are held in this health area now ? *Berapa banyak kunjungan ke daerah sulit /bulan yang diadakan oleh Pusat Kesehatan sekarang?*
C.8	How many HTR communities /villages are there in this in this health area ? *Berapa banyak masyarakat/desa daerah sulit baru yang terdapat di Pusat Kesehatan ?*
C.9	How many HTR communities /villages are served by the SOS programme ? *Berapa banyak masyarakat/desa daerah sulit yang dicakup oleh program SOS?*
C.10	How many HTR communities /villages are not yet served by the SOS programme ? *Berapa banyak masyarakat/desa daerah sulit yang belum dicakup oleh program SOS?*
C.11	How many EPI /Vit A target children were reached before the introduction of SOS ? *Berapa banyak anak-anak sasaran EPI / Vit A yang tercakup sebelum SOS diperkenalkan?*

C.12	How many are reached now, following introduction of SOS ? *Berapa banyak yang tercakup sekarang, setelah SOS diperkenalkan?*
C.13	Were there any problems or difficulties with the introduction of SOS ? *Apakah ada masalah atau kesulitan dengan diperkenalkannya SOS?* 1 2
C.14	Were there any unexpected /unplanned results ? *Apakah ada hasil yang diluar harapan / tidak ada dalam rencana?* 1 2
C.15	What were the impacts on other, non-SOS related services ? *Apa dampak terhadap pelayanan non-SOS terkait lainnya?* 1 2
D	**Costs** ***Biaya***
D.1	What additional budgets were provided for implementing SOS in: *Anggaran tambahan apa saja yang didapatkan untuk pelaksanaan SOS pada tahun anggaran:* 2009 2010 2011 1 from MOH Provincial ? *Dari Dinas Kesehatan Propinsi?* 2 from MOH district office ? *Dari Dinas Kesehatan kabupaten ?* 3 from Unicef ? *Dari Unicef?* 4 from other Donors ? *Dari donor lain?* 5 from other sources ? *Dari sumber lain?*
D.2	What resources /types of input were provided in: *Sumber/jenis masukan apa saja yang diberikan pada tahun* 2009 2010 2011 1 by Bupati ? *oleh Bupati?* 2 by community ? *Oleh Masyarakat?* 3 from other sources ? *Dari sumber lain?*
D.4	What additional staff were required for implementing SOS: *Staff tambahan apa yang diperlukan untuk melaksanakan SOS:* 1 Health Workers ? *Tenaga Kesehatan ?* 2 Malaria workers ? *Petugas yang menangani Malaria ?* 3 Nutrition workers ? *Petugas Gizi ?* 4 Drivers ? *Supir ?* 5 Others ? *Lainnya ?*
D.5	What other resources were required for implementing SOS: *Apakah ada sumber daya lain yang diperlukan untuk pelaksanaan SOS:* 1 extra vaccines & Vit A ? *Tambahan vaksin & Vit A?* 2 extra drugs & medicines ? *Tambahan obat-obatan?* 3 extra bednets ? *Tambahan kelambu?* 4 extra vehicles & fuel ? *Tambahan kendaraan & bahan bakar?* 5 extra cold boxes ? *Tambahan kotak pendingin?*

D.13	Does SOS divert funds and resources from other services ? *Apakah SOS mengalihkan dana dan sumber daya dari pelayanan lain?*
D.14	Could SOS be introduced onto other remote and /or HTR areas ? *Apakah SOS dapat diperkenalkan ke daerah terpencil dan / atau daerah sulit lainnya?*
D.15	If yes, what other resources would be needed ? *Jika ya, apa saja sumber daya lain yang diperlukan?*
D.16	What additional vaccines were needed for introduction of SOS ? *Tambahan vaksin apa saja yang diperlukan untuk memperkenalkan SOS ?* pre-SOS *pra SOS* / post-SOS *pasca SOS* 1 BCG 2 Polio 3 DPT /Hep B 4 Measles *Campak*
E	**Strengths /Weaknesses /Lessons Learned** ***Kekuatan/kelemahan/ Pembelajaran***
E.1	What worked well during the introduction of SOS ? *Apa saja yang berjalan dengan baik selama memperkenalkan SOS ?* 1 2 3
E.2	What did not work so well during the introduction of SOS ? *Apa saja yang tidak berlangsung dengan baik selama memperkenalkan SOS ?* 1 2 3
E.3	What are important points that help towards success of SOS ? *Hal penting apa saja yang membantu berhasilnya program SOS?* 1 2
E.4	What are important points in order to avoid problems and /or failure ? *Hal penting apa saja yang diperlukan untuk menghindari masalah dan/atau kegagalan?* 1 2
E.5	What main challenges were encountered during the introduction of SOS ? *apa saja antangan utama yang dihadapi selama memperkenalkan SOS ?* 1 2
E.6	What key factors helped with the introduction of SOS ? *Apa saja faktor kunci yang membantu selama memperkenalkan SOS?* 1 2
E.7	What main lessons were learned during the introduction of SOS ? *Apa saja pembelajaran utama yang didapat selama memperkenalkan SOS?* 1 2
E.8	Should /could SOS be expanded into other areas /Districts /Provinces ?
	Apakah SOS seharusnya/dapat diperluas ke daerah / Kabupaten / Propinsi lain ?
E.9	If yes, what if anything, should be done differently: *Jika ya, apa yang seharusnya dilakukan secara berbeda:* 1 to improve the SOS strategy ? *untuk meningkatkan strategi SOS ?* 2 to increase the impact of SOS ? *untuk mempertinggi dampak SOS ?* 3 to reduce costs ? *untuk mengurangi biaya ?* 4 to reach more children in HTR areas ? *untuk mencakup lebih banyak anak di daerah sulit?* 5 other ? *lainnya ?*

E.10	Any other comments interviewee would like to add ? *Komentar lain yang ingin anda tambahkan?*

5 Community
Masyarakat

A	**Design**
	Desain
A.5	What was the 'package' of interventions selected for SOS in your community: *Apa 'paket' intervensi yang dipilih untuk SOS di masyarakat anda :* EPI /Vit A ? — Bednets ? — Malaria prevention ? — *Kelambu* — *Pencegahan malaria ?* VAC ? — RDT ? — others ? ANC - IFA? — TT? — *lain-lain* *ANC- asam folat zat besi ?*
A.6	What other services might need to be added in the future ? *Pelayanan apakah yang mungkin perlu ditambahkan di masa yang akan datang ?* 1 2 3
B	**Implementation** ***Pelaksanaan***
B.1	How was the SOS strategy introduced *Bagaimana strategi SOS diperkenalkan?* 1 Was a community planning meeting held ? *Apakah diadakan pertemuan perencanaan dengan masyarakat ?* 2 Was an SOS introduction plan prepared ? *Apakah rencana memperkenalkan SOS disusun terlebih dahulu?* 3 Was mapping carried out to identify HTR areas or communities ? *Apakah diadakan pemetaan untuk mengidentifikasi daerah sulit atau masyarakat di daerah sulit?* 4 Was any SOS training /briefing conducted ? *Apakah diselenggarakan pelatihan /briefing tentang SOS terlebih dahulu?*
B.2	Who was responsible for SOS introduction ? *Siapa yang bertanggung jawab untuk memperkenalkan SOS ?*
B.3	Was SOS introduced into the target areas according to plan ? *Apakah SOS diperkenalkan ke daerah sasaran sesuai rencana?*
B.4	When was the first SOS round conducted in this community ? *Kapan kunjungan pertama SOS dilakukan di desa ini?*
B.5	How many SOS rounds have now been conductedin this community : *Berapa kali kunjungan SOS yang saat ini sudah dilakukan di desa ini?* in 2009 ? — in 2010 ? — in 2011 ? *tahun 2009?* — *tahun 2010?* — *tahun 2011?*
B.6	Which services were provided during each of these SOS rounds ? *Pelayanan apa yang diberikan pada masing-masing kunjungan SOS?* in 2009 ? — in 2010 ? — in 2011 ? *tahun 2009?* — *tahun 2910?* — *tahun 2011?* EPI ? VAC ? ANC- IFA ? *ANC - asam folat/zat besi* TT ? Bednets ? *Kelambu?* RDT ? *Tes diagnostik cepat?* Malaria prev ? *Pencegahan malaria?* others ? *lain-lain*

B.7	How many health staff are usually included in the SOS team ? *Berapa orang petugas kesehatan yang biasanya termasuk dalam tim SOS?*
B.8	How does the SOS team usually travel: *Bagaimana biasanya cara tim SOS melakukan perjalanan tugas?* by vehicle ? / *Naik mobil?* — by boat ? / *naik kapal?* — on foot ? / *berjalan kaki?* — Other? / *cara lain?*
B.9	Was SOS introduced uniformly into all target areas ? *Apakah SOS diperkenalkan secara seragam ke seluruh daerah sasaran?*
B.10	Or were there variations in the strategy and /or the 'package' from place to place ? *Atau adakah variasi/perbedaan dalam strategi dan/atau 'paket' dari satu daerah dengan daerah yang lain?*
B.11	If any changes were made locally, who was authorised to decide on these ? *Jika ada perubahan yang dibuat secara lokal, siapakah yang berwenang untuk memutuskan hal tersebut ?*
B.12	Do you consider any changes to the strategy are still needed ? *Apakah Anda mempertimbangkan masih adanya kebutuhan untuk melakukan perubahan strategi ? Apa saja?* 1 2
B.13	What are the reasons for such changes ? *Apa alasan untuk melakukan perubahan tersebut ?* 1 2
B.14	Were any difficulties encountered during introduction of SOS ? *Apa saja kesulitan yang dihadapi dalam memperkenalkan SOS ?* 1 2
B.15	Were there any delays in introduction ? *Apakah ada penundaan dalam memperkenalkan SOS?*
C	**Results** ***Hasil***
C.1	What are the results of the SOS programme in your area ? *Apa saja hasil program SOS di daerah anda?* 1 Good /better than expected ? *Baik/lebih baik dari yang diharapkan?* 2 Not good /less than expected ? *Tidak baik/kurang dari yang diharapkan?* 3 No great changes seen ? *Tidak terlihat adanya perubahan besar?*
C.2	Have quality of services increased with SOS ? / decreased ? / little change ? *Apakah kualitas pelayanan meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.3	Has the range of services increased with SOS ? / decreased ? / little change ? *Apakah rangkaian pelayanan yang diberikan meningkat / menurun / sedikit berubah dengan adanya SOS?*
C.4	How many EPI /Vit A target children were reached before the introduction of SOS ? *Berapa banyak anak-anak sasaran EPI / Vit A yang tercakup sebelum SOS diperkenalkan?*
C.5	How many are reached now, following introduction of SOS ? *Berapa banyak yang tercakup sekarang, setelah SOS diperkenalkan?*
C.6	Were there any problems or difficulties with the introduction of SOS ? *Apakah ada masalah atau kesulitan dengan diperkenalkannya SOS?* 1 2
C.7	Were there any unexpected /unplanned results ? *Apakah ada hasil yang diluar harapan / tidak ada dalam rencana?* 1 2
C.8	What were the impacts on other, non-SOS related services ? *Apa dampak terhadap pelayanan non-SOS terkait lainnya?* 1 2

D	**Costs** ***Biaya***
D.1	What additional budgets were provided for implementing SOS in: *Anggaran tambahan apa saja yang didapatkan untuk pelaksanaan SOS pada tahun anggaran:* 2009 2010 2011 1 from MOH district office ? *Dari Dinas Kesehatan kabupaten ?* 2 from the Health centre ? *Dari Puskesmas?* 3 from Unicef ? *Dari Unicef?* 4 from other Donors ? *Dari donor lain?* 5 from other sources ? *Dari sumber lain?*
D.2	What resources /types of input were provided in: *Sumber/jenis masukan apa saja yang diberikan pada tahun* 2009 2010 2011 1 by Bupati ? *oleh Bupati?* 2 by the Health centre ? *Oleh Puskesmas?* 3 from other sources ? *Dari sumber lain?*
D.4	What additional staff were required for implementing SOS: *Staff tambahan apa yang diperlukan untuk melaksanakan SOS:* 1 Health Workers ? *Tenaga Kesehatan ?* 2 Malaria workers ? 5 Others ? *Petugas yang menangani Malaria ?* *Lainnya ?* 3 Nutrition workers ? *Petugas Gizi ?* 4 Drivers ? *Supir ?*
E	**Strengths /Weaknesses /Lessons Learned** ***Kekuatan/kelemahan/ Pembelajaran***
E.1	What worked well during the introduction of SOS ? *Apa saja yang berjalan dengan baik selama memperkenalkan SOS ?* 1 2 3
E.2	What did not work so well during the introduction of SOS ? *Apa saja yang tidak berlangsung dengan baik selama memperkenalkan SOS ?* 1 2 3
E.3	What are important points that help towards success of SOS ? *Hal penting apa saja yang membantu berhasilnya program SOS?* 1 2
E.4	What are important points in order to avoid problems and /or failure ? *Hal penting apa saja yang diperlukan untuk menghindari masalah dan/atau kegagalan?* 1 2
E.5	What main challenges were encountered during the introduction of SOS ? *apa saja antangan utama yang dihadapi selama memperkenalkan SOS ?* 1 2

E.6	What key factors helped with the introduction of SOS ? *Apa saja faktor kunci yang membantu selama memperkenalkan SOS?* 1 2
E.7	What main lessons were learned during the introduction of SOS ? *Apa saja pembelajaran utama yang didapat selama memperkenalkan SOS?* 1 2
E.8	Should /could SOS be expanded into other areas /Districts /Provinces ? *Apakah SOS seharusnya/dapat diperluas ke daerah / Kabupaten / Propinsi lain ?*
E.9	If yes, what if anything, should be done differently: *Jika ya, apa yang seharusnya dilakukan secara berbeda:* 1 to improve the SOS strategy ? *untuk meningkatkan strategi SOS ?* 2 to increase the impact of SOS ? *untuk mempertinggi dampak SOS ?* 3 to reduce costs ? *untuk mengurangi biaya ?* 4 to reach more children in HTR areas ? *untuk mencakup lebih banyak anak di daerah sulit?* 5 other ? *lainnya ?*
E.10	Any other comments interviewee would like to add ? *Komentar lain yang ingin anda tambahkan?*

NARROWING THE GAPS TO MEET THE GOALS

7 September 2010

A special report on a new study by UNICEF shows that an equity-focused approach to child survival and development is the most practical and cost-effective way of meeting the health Millennium Development Goals for children.

20 YEARS
THE CONVENTION ON THE RIGHTS OF THE CHILD

unicef
unite for children

In everything we do, the most disadvantaged children and the countries in greatest need have priority.

UNICEF's Mission Statement

Advancing towards the Goals

A new UNICEF study has arrived at a surprising and significant conclusion: An equity-based strategy can move us more quickly and cost-effectively towards meeting Millennium Development Goals 4 and 5 – reduce child mortality and improve maternal health – than our current path, with the potential of averting millions of maternal and child deaths by the 2015 deadline.

Reaching the most deprived and most vulnerable children has always been UNICEF's central mission. But recently it has become an even more pivotal focus of our work, as emerging data and analysis increasingly confirm that deprivations of children's rights are disproportionately concentrated among the poorest and most marginalized populations within countries.

The refocus on equity also reflects our unswerving commitment to meeting the MDGs, which have galvanized unprecedented national and international efforts. Impressive social and economic gains have been achieved for the world's children since 1990, the reference year for many of the Goals. Figures soon to be released by UNICEF show that the global under-five mortality rate, long considered a reliable gauge of child well-being, fell by one third between 1990 and 2009.

Summary of the key findings

- National burdens of disease, undernutrition, ill health, illiteracy and many protection abuses are concentrated in the most impoverished child populations. Providing these children with essential services through an equity-focused approach to child survival and development has great potential to accelerate progress towards the Millennium Development Goals and other international commitments to children.
- An equity-focused approach could bring vastly improved returns on investment by averting far more child and maternal deaths and episodes of undernutrition and markedly expanding effective coverage of key primary health and nutrition interventions.

More children are in primary school than ever before; for the period 2003–2008, net primary school enrolment rose to 88 per cent for the developing world as a whole. Almost all regions have attained gender parity in primary education, with around two thirds of countries and territories having reached this mark by the target year of 2005.

Societies, too, have benefited. Nearly 1.8 billion people have gained access to improved drinking water in the past two decades. HIV prevalence appears to have stabilized in most regions, and deaths from AIDS have fallen since 2004. And despite the global economic crisis, progress is still being made in reducing income poverty, especially in Asia.

Although many challenges remain to fully realize the Goals, these successes demonstrate that we have the knowledge and proven interventions to make unprecedented strides in human development. The task is now to align these assets with political will and judicious investment.

The challenge of achieving equity for children

The gains made towards realizing the MDGs are largely based on improvements in national **averages**. A growing concern, however, is that progress based on national averaging can conceal broad and even widening disparities in poverty and children's development among regions and within countries.

In child survival and most other measures of progress towards the MDGs, sub-Saharan Africa, South Asia and the least developed countries have fallen far behind other developing regions and the industrialized countries.

And within many countries, falling national averages of child mortality conceal widening inequities. Recently, UNICEF's global statistical unit examined sub-national trends in 26 countries where the national under-five mortality rate has declined by 10 per cent or more since 1990. In 18 of these countries, the gap between the child mortality rates of the richest and poorest quintiles has either grown or remained unchanged. And in 10 of these 18 countries, this breach has risen by at least 10 per cent.

These facts and figures, and many more on disparities in child survival and development, are presented in the companion volume to this special report: *Progress for Children: Achieving the Millennium Development Goals with Equity*. That report card reveals the depth and extent of these inequities within countries.

Poverty is a crucial factor determining inequities in child survival and development. In general, however, indicators that show wide disparities across wealth quintiles also exhibit similar gaps between urban and rural areas.

Compared with their wealthiest peers, children from the poorest households throughout the developing world are doubly at risk of dying before age five. The odds are similar for stunting, underweight prevalence or being unregistered at birth.

Seldom do the poorest children, often living in remote areas or urban slums and disproportionately from ethnic minorities, enjoy the same level of access to basic health care, education and protection as the richest. Throughout the developing world, children from the poorest quintile are around 1.5 times less likely to receive measles immunization, or to attend primary school, than the children

from the richest quintile. Although gender gaps in education have narrowed sharply in recent years, girls still face a higher risk of not attending school than boys, in rich and poor areas alike.

For girls, poverty and educational disadvantage exacerbate protection risks such as early sex and child marriage, which are widely associated with adolescent pregnancy and childbirth and their attendant health risks, as well as with increased exposure to sexually transmitted infections including HIV, domestic violence and social isolation. In developing countries, girls from the poorest households are three times as likely to get married before age 18 as girls from the wealthiest quintile. Furthermore, young women with little education are more susceptible to child marriage even in countries where its overall prevalence is low.

Pronounced disparities also exist in the coverage of maternity services. Although provision of both antenatal care and skilled attendance at delivery has increased across developing regions since 1990, women in the poorest quintile are two to three times less likely than those in the richest households to have access to or use these vital interventions.

These marked disparities in child survival, development and protection point to a simple truth: The MDGs and other international commitments to children can only be fully realized, both to the letter and in the spirit of the Millennium Declaration, through greater emphasis on equity among and within regions and countries.

Equity for children is right in principle…

A focus on equity for children has long been a moral imperative: The Convention on the Rights of the Child is founded on the principles of universality, non-discrimination and accountability.

…and strategically sound…

There are other compelling arguments for pursuing strategies with a strong equity slant.

First, several key international goals for children require universality. One of the most prominent is MDG 2, which seeks universal access to primary education. Logically, this objective can only be met if the children currently excluded, the poorest and the most marginalized, are brought into the school system.

Similarly, it will be impossible for global campaigns seeking the eradication of polio or virtual elimination of measles and maternal and neonatal tetanus to succeed without addressing the poorest communities within countries.

Second, having reduced the global under-five mortality rate by one third since 1990, we now have roughly five years to do so again to meet the conditions of MDG 4. Since most child deaths occur in the most deprived communities and households within developing countries, achieving this goal is only possible by extending the fight against childhood illness and undernutrition to them.

Third, breaking the cycle of poverty, discrimination, educational disadvantage and violence experienced by many girls and young women is only possible through equity-focused approaches that eliminate gender-based barriers to essential services, protection and girls' knowledge of their rights.

Fourth, new technologies and interventions can contribute to faster gains for the poor if applied equitably and at scale. Immunizations with pneumococcal conjugate and rotavirus vaccines have the potential to accelerate progress towards reducing pneumonia and diarrhoea, among the foremost killers of poor children. Recently developed interventions such as mother-baby packs of antiretroviral medicines have the potential to expand access to the many women and children still missing out on vital services to combat HIV and AIDS. The spread of SMS (Short Message Service) technology is allowing more data to be collected rapidly, enabling improved targeting of interventions to those most in need.

Finally, but most fundamentally, in the push to meet the Goals it would be strategically short-sighted to leave the poorest and most marginalized areas until last. We could find ourselves in 2015 facing the tough challenges of reaching the most deprived children of all – but with resources depleted, political will exhausted and a public that has moved on.

…but is it also right in practice?

Many accept that equity-focused approaches, based on extending services and protection to the poorest children and most impoverished communities, are right in principle and even sound in logic. But they have long questioned whether, in practice, such strategies are worthwhile as a priority, given their cost and complexity.

Such reasoning is not easily dismissed. It is hard to reach the poorest: They tend to live in areas that are remote, that have weak transportation links and limited physical infrastructure. Consequently, it is often far costlier to extend services to them than to provide these for more affluent groups. And even when services are made available, they must be free or at least heavily subsidized to ensure uptake, as the poorest are the least able to pay out of their own pockets.

Across the developing world, national governments would focus more on equity-based approaches if there were evidence that such strategies could accelerate progress in a cost-effective way. That is, if the gains in child survival and development achieved by reaching out to the most deprived areas were sufficiently large to offset the additional costs required and could propel nations faster towards the Goals.

Without such evidence, and beset by serious fiscal challenges and an uncertain global economic outlook, policymakers have faced a tough choice: Should they seek the best outcomes for the children who are easiest to reach in the time remaining until the 2015 MDG deadline? Or focus on the children living in marginalized areas with the highest levels of deprivation, where the potential gains are greatest?

This dilemma would be resolved if there were a more cost-effective strategy to simultaneously reduce disparities in the coverage of essential services, accelerate progress towards the MDGs and avert more deaths and other childhood deprivations than the current approaches.

PANEL 1: The logic of equitable solutions

For a long time, the conventional wisdom has been that more lives are saved in poor countries by focusing on the 'low hanging fruit' – those most readily reached by extending proven interventions through traditional service delivery modes such as hospitals and clinics. To focus on the marginalized, though right in principle, was generally not perceived as being cost-effective. However, a review of evidence and experience conducted by UNICEF in mid-2010 suggests that this is no longer true for three reasons:

- Excluded populations within countries generally have a larger proportion of children than other groups owing to higher fertility rates. As their rates of child mortality are also often considerably higher than those of more affluent groups, their burden of child deaths constitutes a large share of the national total.
- In excluded populations, a higher proportion of children die of preventable or treatable infectious diseases or conditions than the children of other groups.
- Most excluded populations have much lower coverage levels of cost-effective interventions with a proven high impact in reducing major childhood diseases and conditions. Consequently, these populations have the greatest scope for gains in survival and development outcomes in the next five years.

These arguments are perhaps most readily understood by example. Take Nigeria, where around 1 million under-fives die every year. The poorest quintile of households accounts for 325,000 of these deaths, the richest for 72,000. In addition, communicable diseases account for a far higher share of child deaths in the poorest quintile of households (66 per cent) than in the richest (44 per cent). And skilled birth attendance is available to a mere 8 per cent of pregnant women in the poorest quintile, while for the richest it is almost ten times higher, at 86 per cent.

It is therefore logical to assume that increasing the number of skilled attendants at delivery for pregnant Nigerian women, or extending interventions to prevent or treat communicable diseases in Nigerian children, has a considerably greater potential impact on the poorest quintile, where the burdens of disease and mortality are highest, than on the richest.

Over the past decade, there has been mounting evidence that such a strategy might be possible. In May 2010, UNICEF set out to determine if an equity-focused approach to child survival and development, always right in principle, might also be right in practice.

We asked ourselves this specific question: *Because the needs are greatest in the most deprived areas, would the benefits of concentrating on them outweigh the greater costs in reaching them?*

A new model of equity for children

At the outset, UNICEF staff representing a range of disciplines reviewed the data, literature and country experiences of mainstream and pro-equity strategies in four key areas: young child survival and development; HIV and AIDS; basic education and gender equality; and child protection. This extensive review informed the broad policy recommendations presented later in this report. It also provided a base for examining the organization's initial hypothesis that an equity-based approach focusing on the most excluded populations could accelerate progress towards the MDGs in a cost-effective way (*see Panel 1*).

To test its hypothesis further, UNICEF then assembled a research team of in-house specialists and international health experts to model an equity-focused strategy and compare its predicted outcomes against those of the current mainstream strategies for achieving the health MDGs for children. An extensive body of evidence on equity for children relates to public health, stretching back to the comprehensive primary-health-care approach set forth more than 30 years ago in the Declaration of Alma Ata.

The broad steps involved in the modelling exercise and its results are summarized below. Our intention is to publish the full methodology and complete findings of the study in a leading peer-reviewed journal in the coming months.

Selecting the countries

The modelling exercise involved several stages. In the initial stage, the research team, together with UNICEF's statistical unit, undertook an exhaustive review of approximately 60 countries, and then narrowed that number down to 15 that had sufficient data to analyze different levels of deprivation and sub-national patterns of inequity. The team further divided these 15 countries into four typologies, ranging from low-income countries where the majority of children experience high levels of deprivation, to middle-income countries with less deprivation but significant inequality between the most deprived and the more affluent.

Setting the strategies

Next, the team defined complex strategies to address child and maternal survival and health in the run-up to the 2015 MDG deadline. It should be noted that the strategies relate to the way additional funds could be invested to meet the health MDGs for children over the next five years. They do not constitute a critique of the status quo – which has generated considerable gains in primary health care in the past two decades – or propose an overhaul of the current public health systems prevailing in developing countries.

The *equity-focused approach model* aims to accelerate progress, reduce disparities and lower out-of-pocket expenditures for the poor through three key measures.

The first is to upgrade selected facilities, particularly for maternal and newborn care, and expand maternity services at the primary level, including maternity 'waiting homes'. These are facilities located

near health centres or hospitals where pregnant women from remote areas can stay for a few weeks before they are due to deliver to ensure that they are in close proximity to a health facility at the time of delivery. Such facilities have proven to be effective in countries as diverse as Peru and the United Republic of Tanzania.

The second is to overcome barriers that prevent the poorest from using services even when they are available to them. The equity-focused approach proposes to massively expand outreach services, eliminate user charges and extend cash transfers to the poorest to cover transport, subsistence and other indirect costs known to prevent them from utilizing services. To encourage healthy practices and foster the use of basic health care, the strategy also proposes to expand mass communication and employ community-based promoters of health and nutrition.

The third measure involves an innovative proposal: task shifting. This involves community outreach, greater use of community health workers to deliver basic health-care services outside of facilities whenever appropriate, and enhanced community involvement to promote care-seeking and healthy practices (*see Panel 2*).

The *current path approach* broadly approximates contemporary approaches and depicts their path over the next five years. It lends significant but less-focused attention to the most deprived groups and areas. The strategy's primary focus is to use additional investment to increase the training and deployment of professional health workers, expand building infrastructure and use mass communication to encourage the poor to seek care.

PANEL 2: Task shifting

Consider this: Only 60 per cent of under-fives with suspected pneumonia see an appropriate health-care provider. Many of the approximately 1.2 million pneumonia-related deaths among under-fives might be averted by ensuring that the poorest and most susceptible to the condition have access to care and basic medicines such as antibiotics in the places where they live.

Increasing evidence shows that many of the major diseases that afflict and kill poor children in particular – pneumonia, diarrhoea, malaria, measles and severe acute malnutrition – can often be managed successfully at the community level if community health workers are provided with adequate supervision, support and incentives. Without such innovation, children will continue to die for want of proven, low-cost interventions.

In the short term, using community health workers to deliver basic health-care interventions outside of facilities has two potential benefits. First, it can sharply expand the number of health workers available to poor children and families. And second, it lowers the cost of providing basic health care to them.

When task shifting is complemented by measures to promote the use of services, through both mass communication and individual advocacy on the part of community health and nutrition promoters, it can markedly increase access to and utilization of essential primary-health-care services.

In common with the equity approach, direct user charges for health and nutrition services are eliminated and outreach initiatives are expanded to ensure wide coverage of such basic preventive interventions as immunization and promote healthy feeding, hygiene and sanitation practices.

Both strategies apply the same selection of public health interventions, which are derived from an extensive body of literature – notably *The Lancet* series on maternal, newborn and child health and nutrition and other systematic reviews. These interventions can be broadly divided into three types: preventive, promotive and curative.

Preventive measures seek to prevent diseases and undernutrition and to support pregnant women. Examples include immunization, micronutrient supplementation, antenatal care and prevention of mother-to-child transmission of HIV. Promotive measures foster healthy feeding, hygiene and sanitation practices and other healthy behaviours. Early and exclusive breastfeeding, hand washing with soap, correct and comprehensive knowledge of HIV, and the use of insecticide-treated nets to prevent malaria are four such interventions. Curative measures aim to treat diseases and conditions, and to support mothers and newborns during delivery and in the post-partum period. They include interventions such as antibiotic treatment for pneumonia, skilled attendance at delivery and emergency obstetric care, treatment of severe acute malnutrition, and prophylaxis and paediatric treatment for HIV and AIDS.

Application of all three types of intervention in packages is proven to have a high impact on the main causes of maternal, newborn and child deaths among the poor.

Running the simulation

The final stage of the modelling process involved a highly complex simulation, running both strategy models through the four country typologies. For the simulation, the research team employed the Marginal Budgeting for Bottlenecks (MBB) model. Jointly developed by the World Bank and UNICEF, MBB has been widely employed in international public health research. It is a powerful tool for designing and testing development strategies.

MBB's central premise is that the success of strategies lies in their ability to overcome barriers limiting the supply of and demand for essential services. Supply-side barriers refer to the availability of commodities, physical infrastructure and human resources, and the proximity of physical services to communities.

Demand-side barriers are those that impede the initial and continued use of services by the poorest. They include such factors as distance, time and costs associated with using services, poor awareness and quality concerns, and social and cultural impediments.

Using MBB, policymakers and researchers can simulate varying configurations of service delivery modes to expand access and measures to encourage usage. For each strategy, the model generates the predicted impact on intervention coverage and health outcomes, overall cost and out-of-pocket expenditures for the poor, and cost-effectiveness (measured as the number of deaths averted for each $1 million spent).

Prior to this study, MBB had never been applied to analyzing the differences between the most and least deprived populations within countries. Approximately 180,000 variables related to key interventions, bottlenecks, costs, disease burdens, population size and many other factors were employed in the simulation exercise. At the same time, the research team and other UNICEF staff continued to review hundreds of articles on equity-focused approaches, consulted with external specialists on evidence and methodology, and spent a day with leading international experts and advocates who were asked to review the work. The surprising results are summarized below.

Reviewing the results

Two initial results of the simulation exercise stand out.

First, an equity-focused approach will accelerate progress towards the health MDGs faster than the current path.

And second, it will be considerably more cost-effective and sustainable than the current path in all country typologies.

The potential MDG gains are significant. Across all country settings and deprivation patterns, the equity-focused approach has the best results in reducing child and maternal mortality, diminishing stunting, and increasing coverage of measures to prevent mother-to-child transmission of HIV (*Figures 1 and 3*). And it has the additional benefits of narrowing gaps between the most and least deprived groups and areas in all four country typologies (*Figures 2a and 2b*) and of lowering out-of-pocket expenditures for poor families at the same time.

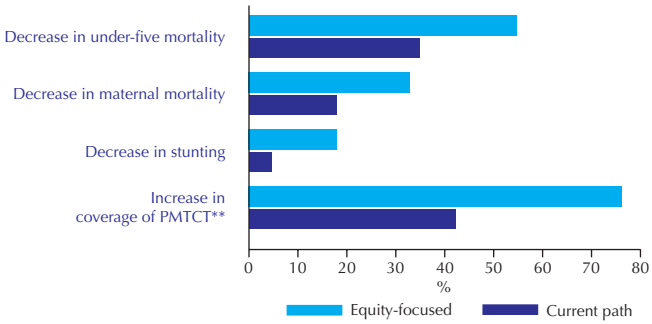
The equity-focused approach is especially cost-effective in low-income, high-mortality countries. In these settings, for every additional $1 million invested this approach averts 60 per cent more deaths than the current path (Figure 4).

To be sure of these conclusions, in July 2010 UNICEF invited leading international health researchers and economists to rigorously test the model and extensively review its conceptual framework, assumptions, inputs, methodology and results. The expectation is that this testing will continue as the model is further refined and applied to other areas of child development, notably education and child protection.

Some initial policy considerations

This analysis, together with the aforementioned literature review, suggests a series of initial policy considerations that are highly pertinent to UNICEF's renewed commitment to meeting the MDGs by adopting equity-focused approaches in its work. While the implications elaborated below are perhaps most appropriate for primary health care, they are also applicable to numerous other child development areas.

FIGURE 1: CONTRIBUTION OF STRATEGIC MODELS TOWARDS HEALTH MDGS*



Based on the analysis of 15 countries: Bangladesh, Benin, Ghana, Honduras, Kenya, Mali, Niger, Nigeria, Pakistan, Philippines, Rwanda, South Africa, Uganda, Viet Nam and Zimbabwe.

* The indicators here refer to health MDGs 1 (Eradicate extreme poverty and hunger); 4 (Reduce child mortality); 5 (Improve maternal health); and 6 (Combat HIV/AIDS, malaria and other diseases). The full list of health MDGs and associated targets referred to in the study can be found on the inside back cover of this report.

** PMTCT: Refers to interventions to prevent mother-to-child transmission of HIV.

Identify the most deprived children and communities

The poorest and most marginalized communities are not systematically assessed and are often forgotten when national development plans are laid and resources allocated. They are also the least likely to have a voice in global and national decision-making forums. Disaggregating national data to identify these groups and assess the factors that exclude them is fundamental to designing equitable solutions.

Several measures are currently available to identify the most deprived children. They currently include the child poverty measure, pioneered by the late Peter Townsend and the University of Bristol; the multidimensional poverty index recently developed by the Oxford Poverty and Human Development Initiative; and the Countdown to 2015 coverage gap measure. All of these have benefited enormously from the expansion of household surveys such as Demographic and Health Surveys and Multiple Indicator Cluster Surveys.

The potential for further advancements in data collection is growing rapidly. National governments such as those of India and Brazil are providing enhanced disaggregation of data on child survival and development. Population-based household surveys provide an important source of data on disparities that has yet to be fully exploited. New technologies, such as SMS, are facilitating more rapid and extensive data collection for and by poor and marginalized communities. Further investment in data gathering and analysis will strengthen the basis for equity-focused action at the national and sub-national levels.

Invest in proven, cost-effective interventions

The most effective interventions in health and nutrition are already well known. Investing in these interventions in packages is a proven and cost-effective way to avert deaths and reduce stunting.

In education, abolishing school fees, providing cash transfers to poor families and introducing water, sanitation and hygiene programmes in schools are key actions known to boost school enrolment and attendance.

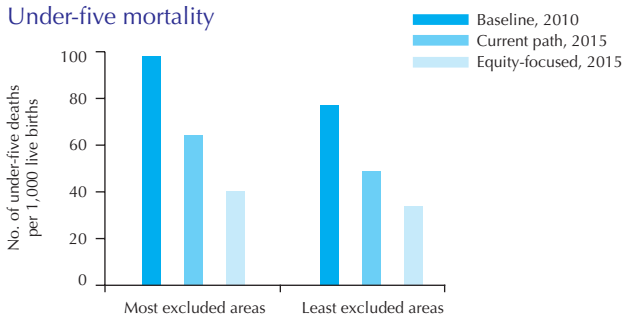
Solutions also exist to meet the challenge of sparse water and sanitation facilities among the poor. Community-based initiatives have been successful in encouraging households to use improved sanitation facilities and stop the practice of open defecation. Affordable technologies such as hand-drilled water wells and locally manufactured pumps bring water supplies within reach. Promotion of hygiene practices, such as hand washing with soap and home drinking water treatment, empower the poor to take control of these key determinants of their health.

Proven methods to prevent the transmission of HIV include education and health services that channel comprehensive knowledge and life skills to young people – especially to girls, who are much more susceptible than boys to the virus; correct and consistent use of condoms; and measures to prevent mother-to-child transmission of the virus. The decentralization of HIV services, especially antiretroviral therapy, has significantly helped expand access to HIV treatment.

Overcome bottlenecks and barriers

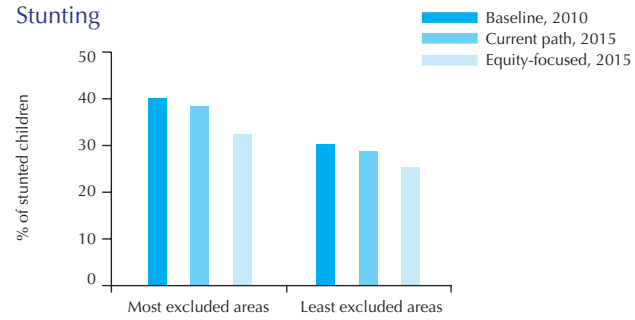
The current investment strategies for achieving the MDGs are heavily focused on removing barriers to service provision, including for the poor and marginalized. Less attention has been paid, however, to overcoming barriers to service utilization, such as social and cultural norms, the time and distance required to reach essential services, their uneven quality and low awareness of care among poor communities.

FIGURE 2a: PREDICTED IMPACT OF STRATEGIC MODELS ON UNDER-FIVE MORTALITY



Based on the analysis of 15 countries: Bangladesh, Benin, Ghana, Honduras, Kenya, Mali, Niger, Nigeria, Pakistan, Philippines, Rwanda, South Africa, Uganda, Viet Nam and Zimbabwe. The most and least excluded areas for each country are determined by coverage levels of essential primary-health-care services.

FIGURE 2b: PREDICTED IMPACT OF STRATEGIC MODELS ON STUNTING



Based on the analysis of 15 countries: Bangladesh, Benin, Ghana, Honduras, Kenya, Mali, Niger, Nigeria, Pakistan, Philippines, Rwanda, South Africa, Uganda, Viet Nam and Zimbabwe. The most and least excluded areas for each country are determined by coverage levels of essential primary-health-care services.

Equity-focused approaches can accelerate progress by complementing efforts to scale up commodities and human resources with measures that encourage poor families to seek and use essential services. Innovative financing mechanisms such as cash transfers can help overcome direct and indirect financial barriers. Information, education and communication solutions are available to surmount cultural and social barriers. Mobile and outreach services, and the innovative use of mobile technology, can greatly diminish the time and distance involved in obtaining services.

Above all, policymakers must continue to seek practical solutions to overcoming entrenched barriers by continuing to address a fundamental question: What barriers continue to keep poor children and families from accessing and utilizing services?

Partner with communities

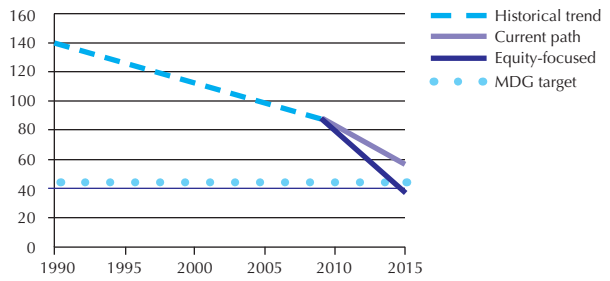
The development of high-quality, well-resourced and adequately staffed facilities is the cornerstone of building strong national systems in health and education. But in the most remote communities, excluded from mainstream services by distance, cost or simply disregard, enabling families to have regular access to outreach or community-based care may be the most propitious way to improve environmental health and combat disease and undernutrition in the short to medium term. Facility-based care is costly; outreach and community solutions are highly cost-effective and, most importantly, open to all.

Community engagement is also vital, not only in the provision of services but also in their utilization and in the promotion of improved health practices and behaviours. Hand washing with soap has the highest impact of any intervention on reducing diarrhoea, lowering the condition by almost 40 per cent. Early and exclusive breastfeeding is one of the most effective preventive methods of saving children's lives, with the potential to avert 13 per cent of all under-five deaths in developing countries. Promoting such measures at the community level has the potential to accelerate progress towards MDG 4 at a faster rate than ever before.

Engaging communities in the health, education and protection of their children has benefits that go well beyond measurable improvements in child development outcomes. Such partnerships can also help address other entrenched and pernicious barriers, including discrimination on the basis of gender, ethnicity, disability, HIV status or stigma, that serve to exclude women and children from vital services and protection.

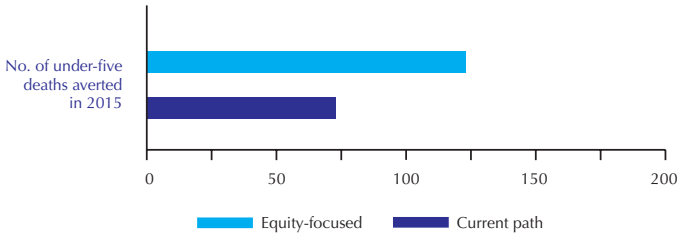
Community-focused programmes often begin tentatively and face tough challenges, particularly in retaining and motivating staff. The correct response is not to suspend these initiatives when difficulties arise, but to support and target them better. Numerous initiatives across the developing world – Mexico's diagonal approach to health care, Brazil's Family Health Programme and *Bolsa Escola* initiative, Ethiopia's Health Extension Programme, Pakistan's Lady Health Workers and many, many others – have demonstrated the enormous potential of community-focused programmes. Most importantly, they prove that scaling up cost-effective interventions for the poor at the community level, complemented by social protection initiatives, has the potential to help build national systems, not undermine them.

FIGURE 3: CONTRIBUTION OF STRATEGIC MODELS TO MEETING MDG 4



Based on the analysis of 15 countries: Bangladesh, Benin, Ghana, Honduras, Kenya, Mali, Niger, Nigeria, Pakistan, Philippines, Rwanda, South Africa, Uganda, Viet Nam and Zimbabwe.

FIGURE 4: COST-EFFECTIVENESS OF STRATEGIC MODELS* (Number of deaths averted per $1 million invested)



* Based on the analysis of four low-income, high-mortality countries: Mali, Niger, Rwanda and Uganda.

Maximize the impact of available resources

Article 4 of the Convention on the Rights of the Child requires governments to undertake measures aimed at meeting children's rights "to the maximum extent of their available resources". Cost-effectiveness is a crucial criterion to assist in assigning priorities in the allocation of financing for child survival and development.

Given the current global economic climate, judicious use of available resources to spur progress towards the MDGs with equity is imperative. Approaches with a strong focus on the poorest and most deprived children, and on proven, cost-effective measures to reduce the barriers they face in accessing and using essential services, are appropriate for these times.

Reducing out-of-pocket expenditures for the poorest is also central to an effective equity-focused approach. Poor households expend a significant amount of their resources on costs related to health care and education. If excessive, these costs can have harmful effects. Families are often unable to afford essential services for their children even when these are made available. And when they do eventually use these services, it is often at the expense of other items essential for children's well-being, such as food and clean water.

Many countries are attempting to overcome this problem by devising policies and strategies aimed at reducing direct and indirect costs associated with services. Social protection mechanisms, including cash transfers, health insurance and other forms of assistance, are widely and increasingly accepted as vital ways to protect marginalized families from external shocks and motivate them to ensure that their children use key services.

Conclusions

The recommendations made here are a work in progress and will require deeper analysis and greater consideration as they evolve. But even at this incipient stage, the work undertaken thus far suggests that major inroads are possible to reach the poorest and most vulnerable children by refocusing our energies and investment on alleviating the barriers that exclude them.

The findings are significant, and have been rigorously reviewed and re-reviewed. But they should be interpreted judiciously. The study is based on models, not predictions of the future. It is not synonymous with the specific equity strategies that UNICEF will be pursuing in the wide range of countries in which we work. Nor should it be interpreted as a criticism of the current strategies already under way, which have contributed so much to the historic progress already made towards the MDGs.

The results do suggest, however, that a refocus of efforts on an equity-based approach is right in principle and right in practice. In principle, it reflects the universality precept embodied in the Convention, and is intrinsic both to the achievement of universal primary education (MDG 2) and the prevention of major diseases.

In practice, an equity-focused approach has the potential to accelerate progress towards the health MDGs for children at national and local levels, and to save many more lives for resources expended than the current approaches.

Implementing equity-based approaches will require courage, determination and substantial effort. And like most things that are worthwhile, it will be challenging. But given the evidence of this new study and UNICEF's own experience, it is a challenge that can be met.

The health MDGs referred to in this study are:

GOAL 1: Eradicate extreme poverty and hunger

TARGET 1C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger

GOAL 4: Reduce child mortality

TARGET 4A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate

GOAL 5: Improve maternal health

TARGET 5A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio

TARGET 5B: Achieve, by 2015, universal access to reproductive health

GOAL 6: Combat HIV/AIDS, malaria and other diseases

TARGET 6A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS

TARGET 6B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it

TARGET 6C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases

GOAL 7: Ensure environmental sustainability

TARGET 7C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

UNICEF
3 United Nations Plaza
New York, NY 10017, USA

Website: www.unicef.org
Email: pubdoc@unicef.org

September 2010

Annex 8

Evaluation of Sustained Outreach Services for Immunization & Vitamin A Supplementation

Schedule of Visits - Field Work Phase

Gordon Larsen and Paul Manoempil
October 3–November 4, 2011

DATE	TIME	ACTIVITY	LOCATION	PARTICIPANTS	STATUS
Monday October 3, 2011		Team meeting in Jakarta			
Tuesday October 4, 2011		Team meeting in Jakarta			
Tuesday October 5, 2011	*7.30am* 1pm 3pm	*Depart for Kupang* Meet with the Provincial Health Office Meet with the UNICEF team	*JKT – Kupang flight* PHO NTT UNICEF Kupang		
Wednesday October6, 2011	8am *10am* 11am 12pm 2pm 4pm	Meet with the Kupang District Health Office/Team *Travel to Puskesmas X* Meet with Puskesmas X *Travel to Community X* Meet with Community leaders and kader *Travel to Kupang*	DHO Kupang *By car* Puskesmas X *By car* Community X *By car*		
Thursday October7, 2011	8am 9am 10am 1pm 3pm	*Travel to Puskesmas X* Meet with Puskesmas X *Travel to Community X* Meet with Community leaders and kader *Travel to Kupang*	*By car* Puskesmas X *By car* Community X *By car*		
Saturday October 8, 2011		Free day			
Sunday October 9, 2011		*Depart for Alor*	*Kupang– Alor flight*		

Annex 8

DATE	TIME	ACTIVITY	LOCATION	PARTICIPANTS	STATUS
Monday October 10, 2011	8am *10am* 11am *12pm* 2pm *4pm*	Meet with the Alor District Health Office/Team *Travel to Puskesmas X* Meet with Puskesmas X *Travel to Community X* Meet with Community leaders and kader *Travel to Alor (?)*	DHO Alor *By car* Puskesmas X *By car* Community X *By car*		
Tuesday October 11, 2011	*8am* 9am *10am* 1pm *3pm*	*Travel to Puskesmas X* Meet with Puskesmas X *Travel to Community X* Meet with Community leaders and kader *Travel to Alor (?)*	*By car* Puskesmas X *By car* Community X *By car*		
Wednesday October 12, 2011		*Depart for SBD*	*Kupang– Alor flight*		
Thursday October 13, 2011	8am *10am* 11am *12pm* 2pm *4pm*	Meet with the SBD District Health Office/Team *Travel to Puskesmas X* Meet with Puskesmas X *Travel to Community X* Meet with Community leaders and kader *Travel to SBD capital (?)*	DHO SBD *By car* Puskesmas X *By car* Community X *By car*		
Friday October 14, 2011	*8am* 9am *10am* 1pm *3pm*	*Travel to Puskesmas X* Meet with Puskesmas X *Travel to Community X* Meet with Community leaders and kader *Travel to SBD capital (?)*	*By car* Puskesmas X *By car* Community X *By car*		
Saturday October 15, 2011		*Depart for Ternate*	*SBD – Ternate flight*		
Sunday October 16, 2011		Free Day			
Monday October 17, 2011	1pm 3pm	Meet with the Provincial Health Office Meet with the UNICEF team	PHO – Sofifi (?) UNICEF N Maluku		
Tuesday	*7:30am*	*Travel to DHO,*	*Sofifi – Bumi flight*		

Annex 8

DATE	TIME	ACTIVITY	LOCATION	PARTICIPANTS	STATUS
October 18, 2011	10am *11am* 1pm	Meet with the Bumi District Health Office/Team *Travel to Puskesmas Maba* Meet with Puskesmas X	Bumi *By car* Puskesmas Maba		
Wednesday October 19, 2011	*8am* 11am	*Travel to Community X* Meet with Community leaders and kader	*By car* Community X		
Thursday October 20, 2011	*8am* 11am	*Travel to Puskesmas X* Meet with Puskesmas X	*By car* Puskesmas X		
Friday October 21, 2011	*8am* 11am	*Travel to Community X* Meet with Community leaders and kader	*By car* Community X		
Saturday October 22, 2011		*Travel to Ternate*	*By car*		
Sunday October 23, 2011		*Travel to Tubelo*	*By Air*		
Monday October24, 2011	*7:30am* 10am *11am* 1pm	*Travel to DHO,* Meet with the District Health Office/Team *Travel to Puskesmas X* Meet with Puskesmas X	*Sofifi – Bumi flight* TBD *By car* Puskesmas X		
Tuesday October 25, 2011	*8am* 11am	*Travel to Community X* Meet with Community leaders and kader	*By car* Community X		
Wednesday October 26, 2011	*8am* 11am	*Travel to Puskesmas X* Meet with Puskesmas X	*By car* Puskesmas X		
Thursday October 27, 2011	*8am* 11am	*Travel to Community X* Meet with Community leaders and kader	*By car* Community X		
Friday October 28, 2011					
Saturday October 29, 2011		*Travel to Ternate*	*By air*		
Sunday October 30, 2011		*Travel to Ambon*	*By air*		
Monday October31, 2011	9am	Meet with the Provincial Health Office	PHO –		

Annex 8

DATE	TIME	ACTIVITY	LOCATION	PARTICIPANTS	STATUS
	11am	Meet with the UNICEF team *Travel to Tual*	UNICEF Maluku *By air*		
Tuesday November 1, 2011	*9am* 10am *11am* 1pm	*Travel to DHO,* Meet with the District Health Office/Team *Travel to PuskesmasX* Meet with Puskesmas X	*By car* DHO *By boat* PuskesmasX		
Wednesday November 2, 2011	*8am* 11am	*Travel to Community X* Meet with Community leaders and kader	*By boat* Community X		
Thursday November 3, 2011	*8am* 11am	*Travel to Puskesmas X* Meet with Puskesmas X	*By boat* Puskesmas X		
Friday November 4, 2011	*8am* 11am	*Travel to Community X* Meet with Community leaders and kader	*By boat* Community X		
Saturday October 29, 2011		*Travel to Ambon*	*By air*		
Sunday October 30, 2011		*Travel to Jakarta*	*By air*		

Evaluation of Sustained Outreach Services for Immunization & Vitamin A Supplementation

Province	District	What assumptions made in designing SOS ?							
		EPI	sweep	No OB	remote	HTR	LC	UCI	HDO
NTT							X		
	Sumba BD		X						
	Alor	X					X		
	Kupang		X	X					
Maluku								X	
	Aru		X						X
Maluku Utara			X	X	X				
	E. Halmahera					X	X		X
	N. Halmahera							X	

Notes:

EPI	SOS to bring EPI services to areas Posyandu cannot reach
sweep	Door-to-door 'sweeping' to be conducted if target coverage not achieved
No OB	There will be no outbreaks of EPI diseases
remote	Remote and LC areas supported by SOS, other areas through district budget
HTR	SOS to bring services to remote /hard to reach areas
LC	SOS brings services to areas with low routine coverage
UCI	To reach Universal Child Immunization (UCI) in all villages
HDO	Tracking /providing services in areas with high drop-out rates

Responses on Assumptions Made in Design of the SOS Programme

Province	District	How was 'success' defined in the SOS Programme							
		Inc Co	De DO	No OB	EPI 90	Comm	UCI	95 Bu	LGB
NTT		X					X		
	Sumbar BD				X				
	Alor	X	X						
	Kupang	X		X					X
Maluku		X	X						
	Aru	X		X					
Maluku Utara					X			X	
	E. Halmahera	X				X			
	N. Halmahera	X							

Notes:

Inc Co	Increased Immunization Coverage
De DO	Decreased immunization drop-out rates
No OB	No outbreaks of EPI diseases
EPI 90	Immunization coverage >90% for all antigens achieved
Comm	Community participation high & cardre active in immunization
UCI	Universal Child Immunization (UCI) achieved
95 Bu	95% of Immunization budget used
LGB	SOS budget provided by local government

Responses on Defining Success in the SOS Programme

Evaluation of Sustained Outreach Services for Immunization & Vitamin A Supplementation

Province	District	HC	Suggested Additional Services for SOS Package Responses by Health Service Level and Community
NTT	Sumbar BD		De-worming treatment, Iodized Salt treatment
			None
		1	Posyandu Competition, De-worming treatment, Food supplementation
		2	
	Alor		Community Awareness Activity, Additional Vaccine Supplies
		1	Mass blood survey for Malaria, Mass treatment for Filariasis, Local Area Monitoring, Water and Sanitation, Food supplementation
		2	
	Kupang		Training for EPI staff
		1	Mass treatment for Filariasis, Healthy Lifestyles & anti-smoking campaigns, Food Supplementation
		2	
Maluku	Aru		None
			None
		1	None
		2	
North Maluku	E. Halmahera		None
			None
		1	Health Education for the Community, Curative Services, Food Supplementation
		2	
	N. Halmahera		Additional Budget Allocation, Additional Vaccine Supplies
		1	Curative Services, Food Supplementation, Adequate Vaccine Supplies Ensured
		2	

Suggested Additional Services for Including in the SOS Package; Responses by Health Service Level and Community

Annex 11

Evaluation of Sustained Outreach Services for Immunization & Vitamin A Supplementation

Review of Vaccine Management & Storage Provisions at Health Facility A

Summary of observations:

- all vaccines in the cold chain were completely frozen into a thick layer of ice
- vaccine management was totally absent, with different vaccine stocks randomly mixed together, kept in a series of un-labelled plastic bags, and also frozen into the ice
- many vaccine vials had no labels, so could not even be identified
- many vaccine vials observed were long past their expiry date
- no temperature records or charts were kept, and there was no cold chain thermometer
- no vaccine stock records were kept, nor were there any registers for recording stocks
- based on the huge amounts of accumulated ice, there had evidently been no cold chain maintenance for many months, perhaps years
- therefore, vaccine stocks had very likely been frozen for many months, perhaps years
- the health facility was continuing to function, and inevitably, was continuing to use vaccines taken from the stocks examined, apparently unconcerned by, or unaware of, their actual condition.