

Title of the project	Situation Analysis on The Immunization Program and Survey on The Community's KAP Towards Immunization in Naggroe Aceh Darussalam, and North Sumatera Provinces
Conducted by	The Center for Health Research University of Indonesia
Supported/funded by	PATH
Date	July 2007
Sample size	960 households and 40 CHCs
Team	Rita Damayanti, Nugroho S., Agustin Kusumayati, Tri Yunis Miko, Iis Sinsin Nuryasini, Fitriyanur

1. INTRODUCTION

Tsunami, the natural disaster, stroke Nangroe Aceh Darussalam (NAD) Province by the end of 2004. Before that disaster occurred, NAD Province had suffered from long armed conflict. Three months later Nias Island in North Sumatera Province battered by terrified earthquake that caused infrastructure damage. The damage caused by these disasters (both natural or human-made) had caused the damaging of the existed system in various aspects of human life, including the existing Health System. These damages should be built up as fast as possible during these years.

One of the health impacts that easily seen was the reduction of all program achievement, including the decline of the immunization program coverage. This can be seen on WHO-UNICEF joint reporting form (2003), which shown the basic immunization coverage in NAD province only reach to 67 % with variation 19% - 95 %. In additional from the report, immunization coverage in 2005 was still below 80%. In 2006, UNICEF data also showed that immunization coverage in NAD province was still low. Therefore, UNICEF entrusted PATH to be improve the performance of immunization program in these disaster-affected areas (NAD and Nias).

To be able to improve the immunization performance program in both provinces that hit by the catastrophe, the situation analysis to get the comprehensive portrait of the implementation of immunization program at various levels (province, district, and sub-district) as well as from the program beneficiaries in the community is needed to be done. The Center for Health Research, University of Indonesia (PPK UI) had been entrusted by PATH to conduct the situation analysis in both provinces.

The aim of the situational analysis was to get the information about the Immunization Program in NAD and North Sumatera, including local commitment, program management, human resources, logistics, vaccine management and cold chain, *safety injection*, program performance, and knowledge, attitude and practice of the community towards immunization. The result of this situation analysis will be used to develop and implement interventions to improve the program performance.

2. METHODOLOGY

This situation analysis was conducted in a cross sectional manner using both qualitative and quantitative approaches. Qualitative approach was used to get information on the implementation of immunization program at all levels (province, district, and sub-districts) by conducting in-depth interviews to relevant informants (i.e. the heads and staffs of the Division of Communicable Disease Control, Immunization Section, Surveillance Section, Planning Section, Maternal and Child Health Section, Provincial and District Planning Boards, the head and staffs of Community Health Centers, village midwives and *kader* (health volunteers), and non-

government organizations. Observation to various immunization-related facilities was also conducted and secondary data was gathered from various documents.

This qualitative approach was conducted in 8 districts in NAD and 2 districts in North Sumatera. All districts were selected purposively using pre-set criteria such as immunization coverage, the extent of the occurred disaster and the distance to the capital of the provinces.

Quantitative approach was applied to get information on the community knowledge, attitude and practice towards immunization. Data were gathered from mothers of underfive children by interviewing them using a structured pre-tested questionnaire.

This quantitative approach was applied in 4 districts in NAD and 2 districts in North Sumatera. Those six districts were selected randomly from the ten previously selected districts. In each districts, two sub-districts were selected randomly, one sub-district that was close to the district capital and another one that is far (need more than an hour to reach the sub-district) from the district capital. In each sub-district, 2 villages were randomly selected with similar criteria, i.e. one village that close to the sub-district capital and another one that far from the sub-district capital. From each village 40 mothers with underfive children were selected randomly. This sampling method resulted in totally 960 mothers of underfive children as the respondents of the KAP survey.

3. RESULTS

3.1. Immunization Program in NAD and North Sumatera

3.1.1 Policy and Local Commitment

Immunization was a program with national and international-wide commitment thus almost every districts had set the specific priority in this immunization program shown by the budget allocation for the immunization program (in the national level, the budget allocation was 2.5% out of total health budget). Nevertheless, that was not seen in all observed districts. The success of the immunization program was influenced with social and political situation in a district. At the district with political vagueness, the performance would affect all the existing programs. For example: South East Aceh had problem with the Head of Districts election process so the immunization program performance got also affected. Leaderships could also affect the program performance. That was shown at the districts with leaderships crisis such as Lhoksemawe and Central Aceh. The leaderships shifting would affect the success or immunization program performance. Budget for immunization program came from three sources, i.e. National Budget (APBN), Local Budget (APBD Province and District) and donors (such as ISS, GAVI, UNICEF and WHO). Several districts had small budget allocation from APBD and several districts had immense APBD budget operational funds. However, all those operational funds were not enough to cover immunization program operational budget such as to cover remote area and supervision funds. At a number of districts the late of APBD cash liquidation made the immunization program run imperfectly because the member of staff did not dare enough to make use of other funds to run program which had delayed funds. Inter-sectoral coordination seemed better at districts with good immunization coverage compared with districts with low immunization coverage. Nevertheless, this inter-sectoral coordination would only exist when conducting special national-wide immunization activities such as PIN and measles elimination. For regular immunization activities, inter-sectoral coordination did not run well because it was thought as routine work and there was no guideline that encouraged other sectors that health to involve. At the village level, several village leaders were relatively difficult to cooperate in the implementation of immunization program. Immunization TT had its own program compared to basic immunization and school immunization. Similar coordination and commitment between Maternal and Child Health Section and Immunization Section was really needed to achieve

immunization success. In reality, many pregnant mothers did not receive immunization from village midwives (missed opportunity) because the village midwives had no vaccines storage facilities.

3.1.2. Program Management of Immunization

The planning of immunization program in the province and district level was done by using simple planning documents. The planning was done regularly in term of deciding the target of immunization program, the quantity of vaccines needed, and operational planning activities. When planning operational activities, the districts very much depended on the available funds. Districts with high available fund could be more flexible to develop activities using the funds, even for buying vaccines. Operational planning at the Community Health Center (CHC) level was done by planning routine outreach activities plan through Posyandu. A number of Posyandu in some districts (South Nias, Gayo Luwes) was inactive. Coordination within the Immunization Program implementors run well by using various means of communication such as telephone and SMS, but inter-program coordination such as with the sections of Maternal and Child Health, Health Promotion and Surveillance did not run well. Wider inter-program coordination appeared running well when implementing special national activities such as PIN. Inter-program coordination in implementing routine activities was less noticeable.

Immunization monitoring as done by implementing the Local Area Monitoring (PWS) made at all levels. Almost all observed CHCs conducted the PWS. Some districts that could not show that they conduct the PWS. At the province level, PWS was made every month to monitor immunization coverage. Supervision to the District Health Offices (DHO) were done by the staffs from Provincial Health Office (PHO) and to CHCs by the staffs from DHOs. Supervision was found inadequate due to the limited budget (especially for transportation) and time. In many districts motorcycles were available but no budget was allocated for buying gasoline. Supervision had problem of the unreal data when done according to plan, but when during the sudden supervision, the staff member rarely was met. Thirteen out of the 20 sampled CHCs mentioned that supervision was useless. Immunization recording and reporting system was applied by using KMS as a home-based immunization record and registration book as a facility-based immunization record. No standard facility-based record form was applied for village midwives, resulted in difficulty in monitoring and reporting immunization program for them.

3.1.3 Human Resources

It was found that the number, educational background and employment status of the staffs for Immunization Program at all levels varied. At the provincial level, the quantity and educational background of the immunization staffs was quite adequate. In NAD, out of seven staffs five were new staffs in the immunization program. At the districts level, the total number of staffs for Immunization Program was around 2 to 3 persons and some of them were new staffs. Some staffs were still deployed as temporary employee (*Honda*). At the CHC level, mostly there was only one staff for coordinating immunization program (*Jurim*). In NAD almost all staffs for Immunization Program were only trained in a TOT on *midlevel management* and *data quality system*. All village midwives had not participated in any training. The number of vaccinators in the CHCs was about 2-7 persons per CHC, while at the village level there were about 6-38 vaccinators per CHC. Almost all districts stated the problem of inadequate number of immunization staffs and lack of motivation among the staffs due to unavailability of incentives (or other rewards), high burden and low basic salary. The staff knowledge about immunization program seemed far from ideal. Thirty percents from the staff in NAD and 50% of the staffs in North Sumatera could not give the correct answers to the cases given to measure their knowledge.

3.1.3. Logistics

The planning of the needed amount of vaccines made in stages started from CHC, DHO and PHO. The need of vaccine was estimated based on the total number of target, utilization index and coverage of each vaccination, plus the existing stock. BPS and Health Program Registration provided different estimation of the program target. At the provincial level, the BPS estimation was used as the basis for determining the target. Vaccines were delivered from the Ministry of Health (MoH) to the PHO on the provincial request, usually once or twice in three months. Unless there was run out of the vaccine stock at the MoH, usually the PHOs receive enough amount of vaccine. The delivery from PHOs to DHOs varied according to the districts needs, therefore the amount of vaccine at the provincial levels really depended by the uptake by the districts. In NAD, some districts took vaccine twice a year. Some other districts in NAD and North Sumatera took vaccine by public transportation due to a long distance from the district to the province capital and the lack of transportation cost. Nevertheless, all districts mentioned that vaccine received in good condition. The PHO had experienced the run out of the Hepatitis B, BCG and TT stock in 2006 and 2007. It was caused by the delayed delivery from the MoH. During the data collection in NAD there was no BCG vaccine stock and in North Sumatera there was no TT vaccine stock. The availability of vaccine at the PHO affected the vaccine availability at the DHOs as well as the CHCs. One of the districts in NAD experienced the lack of all types of vaccine because all vaccine got damaged due to the lack of electricity supply. Anyway, the availability of syringe and safety boxes was rarely complained.

3.1.4 Cold Chain

In NAD vaccines were stored in five refrigerators at the PHO with the capacity of 8-9 thousands doses, while in North Sumatera, it was stored two cold rooms with huge capacity. Electricity supply in NAD was not continuous, while in North Sumatera the vaccine warehouse had 2 electricity sources and a generator which guarantee the continuity of the electricity supply. Temperature monitoring NAD was somewhat inadequate, while in North Sumatera the temperature was well monitored. However, the cold chain of the vaccines in both provinces were considerably good, indicated by the temperature was about 2-8⁰C. The vaccine quality was monitored by checking its VVM, the freeze tags and thermometers outside the refrigerators. At the district level, vaccines were kept in the refrigerators with the capacity of 3-6 thousand doses. Two districts mentioned that that capacity was still inadequate. There was no special vaccine warehouse, except in Central Aceh and South-east Aceh. All refrigerators had freeze tag and thermometer. Only about half of the sampled districts made good temperature monitoring and recording. Vaccine placement in the refrigerators was still inappropriate. Most CHCs had refrigerators with enough capacity for their needs. Almost all CHCs had not had adequate temperature monitoring and recording. Vaccine placement in the refrigerator was good enough and but only one CHC in Madina had *freeze tag* in the refrigerator. The village midwives did not store vaccines, unless one day before and several days after the immunization day, where village midwives stored the vaccines in their home refrigerators.

3.1.4. Safety Injection

Both observed province had no special incinerator for the medical waste (e.g. used syringes and used vaccine bottles). Both NAD and North Sumatera had planned to build this kind of incinerator. No DHO had incinerator either, except for Pidie where 3 CHCs owned incinerator. In all districts *safety boxes* had been distributed to CHCs, except for South Nias. At the Puskesmas *safety boxes* were rarely used. Most CHCs used inappropriate domestic waste garbage for disposing medical waste. All CHCs stated that medical waste was buried or burned, but during the observation it was found that some CHCs disposed medical waste at domestic waste garbage or even into the river. Several common faults relating with safety injection found during unstructured observations were:

- safety box was used but after it was full, they took waste from the box and re-used the box;
- disposed full safety box in the domestic waste garbage;
- used disposable syringe instead of auto disable syringe;
- BCG was carried in the *disposable syringe* to increase utilization index of the vaccine;
- recapping both before and after the vaccination; and
- syringes and needles were not directly disposed in the safety box.

3.2. Community Knowledge, Attitude and Practice in Immunization

3.2.1 Immunization Coverage

The coverage of full immunization among children in 6 sampled districts was found about 6,2%-55,9%. The immunization coverage in Central Aceh was the highest (55,9%) while in West Aceh was the lowest (6,2%).

3.2.2 Knowledge about Immunization

The community had limited knowledge of immunization. Less than 50% of sampled mothers could mention the diseases prevented by immunization. The most frequently mentioned disease that could be prevented by immunization was Polio and Measles. When they were being asked the reason they immunized their children, only 35,4% answered that the immunization was to prevent their children from infection disease and 74,4% stated that immunization was to keep their children healthy.

3.2.3 Perception on Immunization

In general (more than 70%), the mothers perceived that there was no barriers to immunize their children. The distance (10%-27%) and the cost (5%-22%) were the frequently mentioned as the perceived barriers to immunization.

3.2.4 Immunization Practice

In general (more than 70%) mothers had some information towards immunization. Most of them received information from the health staff (20%-72%) and community leaders (28%-63%), only less than 10% received from mass media.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Positive Findings

The following are positive things found during the assessment:

- There was no strong barrier to immunization among the community to immunize their children.
- There was a good awareness about the importance of immunization among health staffs at all levels.
- Staffs related to immunization program at all levels are honest about their weakness. They do not hide them.
- Staffs are open-mind to new information, knowledge and technology to improve immunization programs.
- Good cooperation.

4.2 Areas to be Improved

The following are some weakness which need high priority to be improved.

4.2.1 Program Management

- Capacity building for all level by conducting training to improve motivation, knowledge, technical skill and management skill.
- Establishment of supportive supervision and/or application of coaching method to improve staff skill.
- Implementation of effective technical assistance especially to remote districts and CHCs which have limited staffs (in terms of quantity and quality).
- Assurance of adequate operational cost includes for establishing reward system.
- Improvement of inter-program and inter-sector coordination, which focuses on integration of program implementation and improvement of its efficiency.

4.2.2 Vaccine Supply and Cold Chain

- Strengthening planning and distribution system of vaccine and other consumables
- Improvement of the cold chain facilities, especially vaccine warehouse at the DHOs, including continuous electricity supply.
- Training to maintain the function of cold chain facility

4.2.3 Safety Injection

- Training and refreshing training on safety injection
- Establishing cost efficient medical waste disposal system

4.2.4 Demand

- Improvement of the community knowledge, attitude and practice by conducting effective health education programs.
- Improvement of the role of community leaders.
- Improvement of various community-based health programs.