

Consultation report on
“The Project for Child Health in
Department of Quetzaltenango, Guatemala”

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For
Area de Salud, Quetzaltenango, Guatemala
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Japan International Cooperation Agency (JICA)

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I. Executive Summary

Based on the agreement between JICA Guatemala and the International Health track in the department of family medicine, Case Western Reserve University/Case Medical Center, three workshops and bedside training sessions were conducted by residents from the department under my supervision. Each session is for 2 weeks to cover basic newborn resuscitation and advanced management of common infant illnesses. One of the unique aspects of the workshop was to focus on hands-on trainings using resuscitation mannequins and work through practical cases in small groups.

The first group in October 2007 focused on resuscitation, CPR (Cardio-pulmonary resuscitation) and triage. The second group in February 2008 focused on newborn care, newborn assessment and management of newborn illnesses. The third group in March 2008 will focus on management of common infant illnesses and general review of the all three sessions.

The training materials were developed based on ETAT (Emergency Triage, Assessment and Treatment¹) and “Managing newborn problems²” both developed by WHO. Management of common childhood illnesses were developed based on the evidence-based recommendations³.

The rationale for providing these series of advanced trainings to primary care providers in the health post and center level derived from two findings in the last two years. 1) There was no functional referral system existed in the region. Therefore, we have to strengthen the capability of health posts and centers to provide appropriate medical care for sick children. 2) In worldwide, U5MR and proportion of neonatal mortality has an inverse relationship⁴. Based on the current U5MR in Guatemala, the proportion of neonatal deaths in the U5MR should be much higher. In another word, significant number of neonatal deaths would be uncounted. As the number of users in public health increases, we anticipate more neonatal illnesses will be seen in health posts and centers.

As the second of three interventions this year, a 4-day workshop on the above topics was conducted and follow-up visits to health posts and centers were provided between February 9th and 22nd, 2008. The purpose of the field visit was two fold: observe the level of care provided by auxiliary nurses at health posts and provide one on one precepting

¹ WHO (2005). Emergency Triage Assessment and Treatment (ETAT). Manual for participants, World Health Organization.

² WHO (2003). Managing newborn problems: a guide for doctors, nurses and midwives. Geneva, WHO.

³ Jones, G., R. Steketee, et al. (2003). "Child survival II. How many child deaths can we prevent this year?" Lancet **362**: 65-71.

⁴ Black, R., S. Morris, et al. Ibid. "Child survival I. Where and why are 10 million children dying every year?" **361**: 2226-2234.

and technical advice if necessary. And observe how the participants of the workshop will disseminate their knowledge and skills to their colleagues at each health center.

The technical consultation for the interpretation of data was provided at the JICA Quetzaltenango office. Collected survey data was analyzed and discussed with project advisor Ms. Fumiko Kudo.

II. Activities

1. Review the contents of the first workshop in October for CPR, Triage using resuscitation baby mannequins.
2. Workshop on newborn examination, common newborn problems and management was provided for two days.
3. Workshop on the management of common infant problems was conducted in the last day of the workshop.
4. Analysis of NS chart utilization survey was conducted and the results were discussed with the chief JICA advisor.
5. Analysis on the mortality and referral data was conducted and discussed.

III. Observations and problems

Review of disease distributions and mortality

1. Based on neonatal mortality in the project areas, three common causes of mortality were similar to those of the rest of the world, neonatal sepsis, prematurity, and pneumonia/asphyxia as top three.
2. Causes of death in overall U5 were also similar to the rest of the world; the top three killers were pneumonia, diarrhea/dehydration and neonatal problems.
3. There is a strong possibility that significant number of neonatal deaths is uncounted in the project areas based on low proportion of neonatal death to U5 deaths: only 19% in 2006 and 21% in 2007. As discussed in overview section, considering the current level of U5MR in Guatemala and project areas, there would be much higher number of neonatal deaths (Approximately 40 to even 50%).

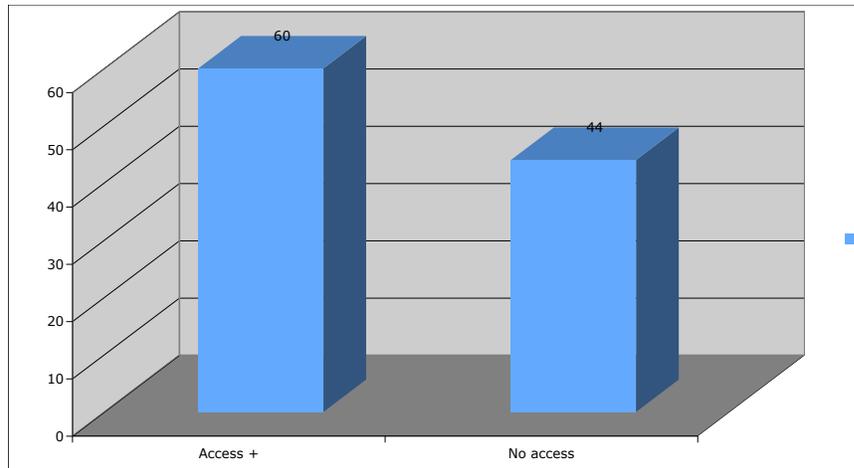


Figure 1 Number of child deaths by access of care in 2006

4. More deaths among under age 5 were observed in the areas where there was an access to health posts or centers than among the areas where there is no access to those resources in both 2006 and 2007.
5. There are several possible explanations for this finding: 1) more active case finding was conducted in the areas where there were health posts or centers. 2) The trust by beneficiaries for the public health system was low not only for the tertiary care hospital but also for health posts or centers.

Workshop and follow-up

6. On the first day of the workshop, many participants showed difficulties to understand the condition-based triage (based on ABCDs) rather than disease-based triage (meningitis, fever, convulsion etc). It seems like the condition-based management seemed new concept for the participants.
7. The health centers still do not provide any advanced treatments that are different from those provided in health posts. In other words, there is not much difference in the capacity of medical care between the health posts and the health centers. It also means that there is no health care pyramid functioning in the project area.

NS chart

8. The majority of the responders still used NS charts exclusively for patients less than 5 years old.
9. Analysis of NS chart usage survey showed that majority of the health care providers in the project areas preferred NS chart to AIEPI chart (83% of

- responses). The reasons for their preference were 'simple' and 'quick' being the top two choices.
10. The average time to fill out the form based on self-claimed time was 9.7 minutes for NS chart and 13.3 minutes for AIEPI, more than 3 minutes shorter for NS chart.
 11. Sixty-six percent of them believed NS chart was superior to AIEPI chart in making referrals, 63% believed they could make diagnosis better with NS chart, and the 71% of them believe that they could treat patients better with NS chart.
 12. Subsequently, 77% of them believed that they had more time for patient care by cutting the time to fill out forms.

Referral system

13. The number of referred cases to the hospital in the past two years was almost the same, however fewer number of patients followed the referral (35% in 2006 vs. 17% in 2007).
14. The number of deaths among those who didn't follow the referral was almost the same, (4 in 2006 and 3 in 2007). However, the proportion among the total number of those who didn't go decreased from 10% in 2006 to 5% in 2007.
15. A significant decrease in the proportion of patients follow the referral needs an attention: There is a possibility that the trust for the hospital among villagers deteriorated and they tried to avoid any referrals. Another possibility is that unnecessary cases were referred based on NS or AIEPI chart. More accurate diagnosis and treatment should be implemented in health posts and centers. There was no increase in actual number of deaths among those who didn't follow the referrals; therefore, over-referral and poor treatment decision at the posts and centers was the real concern.

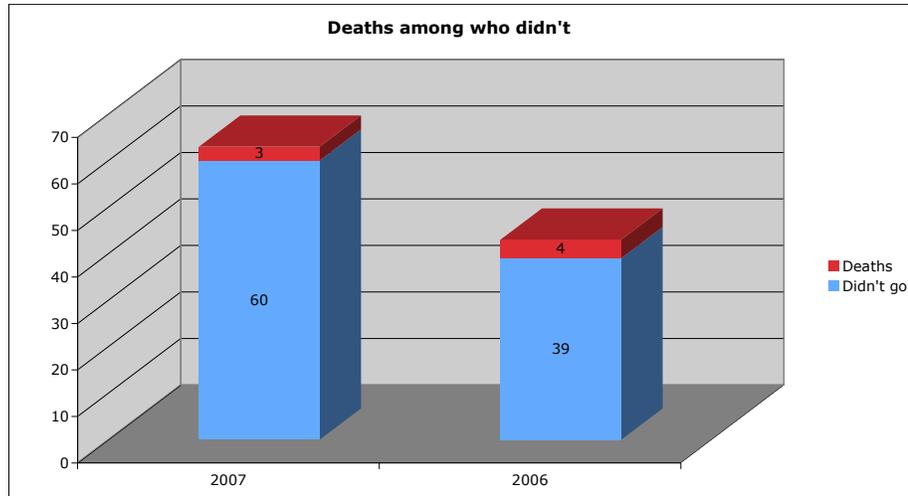


Figure 2 Number of child deaths among who didn't follow hospital referral

IV. Issues with the Counterparts

1. No counterpart in the Area de Salud attended the 4-day workshop while I was there. This fact illustrates their perception of the importance of the training. The training we proposed and conducted might not be their priority agenda. No physicians were participating providing training for auxiliary nurses on CPR in Cajola. Certainly it showed that providing training for nurses and auxiliary nurses was not high priority nor important for physicians.
2. Regular follow-up to improve NS charts, providing technical support for health care providers at posts and centers were not implemented since the last visit. Many of these lack of supports were attributed to the vaccine campaign as the national priority last year and lack of political incentive in general for improvement of services due to the presidential election last November.
3. No revision of NS charts were implemented despite the fact people prefer NS to AIEPI charting system. Obviously, there is a lack of leadership and the lack of sense of ownership in the public health system. It will also question the firm working relationship between JICA project and their counterpart since there is no active participation from JICA counterpart.
4. Throughout the training, I noticed that there is a pervasive culture of 'do nothing'-ism in every level of the public health care system, from health post to centers to the teaching hospital as well as Area de Salud. I am not certain how and when they developed this culture or attitude, but certainly that is the single most important factor to introduce changes for better care for sick children.

IV. Recommendations

1. Strengthen the capabilities of Centro de Salud (health centers).

- 1) Health center should provide technical support and guidance for health posts. Personnel in health posts are motivated to serve the community. However, they are overwhelmed by the enormity of responsibilities to provide meticulous monthly statistic report besides providing medical care. They need constant guidance for motivation and require training for treatment of common illnesses and sick children.
- 2) The fact that number of patients who follow the recommendation of referral to the hospital has been decreasing, the only opportunity to better deal with sick children is to increase the capability to deal with sick children at health centers and post. As I discussed in my recommendation in my consulting report last year, improvement of technical capacities in posts and centers is critical to better serve the community and gain trust and eventually increase the usage of public health care system.
- 3) Technical capacity building should eventually lead to establish trusts of the public health care system among the community.

2. Skilled birth attendant and newborn care within 24 hours after delivery should be provided.

- 1) Newborn care will be an essential component to further decrease the infant mortality rate in this country. It is proven that delivery by skilled birth attendant will decrease neonatal deaths. Newborn examination within 24 hours also proven to prevent neonatal deaths.
- 2) Provide better technical support and guidance to personnel at health posts and centers so that they can better manage common newborn illnesses.

3. Continue to build up referral/counter-referral system among health care tiers.

- 1) For sick children and babies, tertiary care backup is essential since health centers and posts do not have inpatient capacities. Collaboration to build effective and efficient referral system among different health care tiers are essential.
- 2) Morbidity & Mortality conference with ER and Pediatric department should review cases on monthly basis to improve the level of care throughout the tier system.

- 3) The trust for the public health care system by villagers is low: Only 12 to 17% of children died in the project areas came to visit either health posts or centers in the past two years. It is an urgent task to gain the public trust for the public health care system: One of the important strategies to gain trust and increase utilization of these health facilities is to provide better care for sick children by offering more advanced treatments.

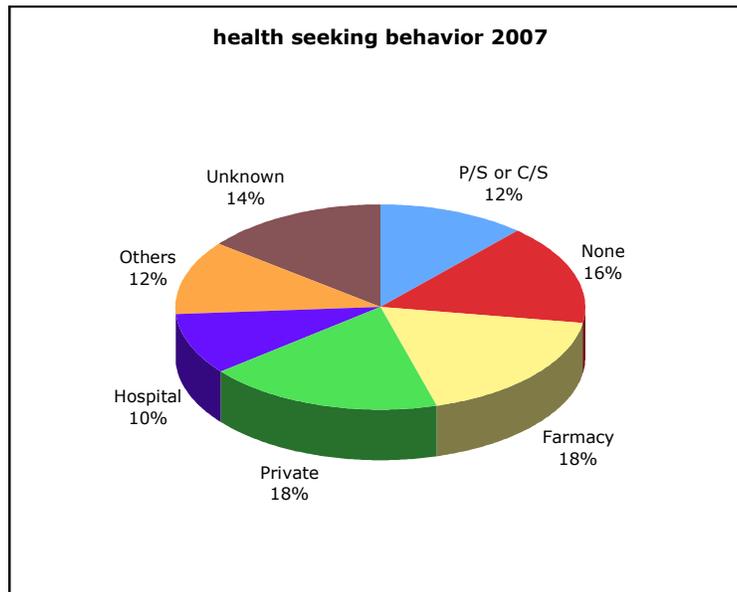


Figure 3 Health seeking behavior of child died in 2007

4. Provide support for continuing education.

- 1) It is essential to keep up with latest evidences to practice and make recommendations for effective interventions. Internet access to key journal articles and textbooks are essential for all personnel, physicians, nurses and expatriate consultants.
- 2) I would like to point out the finding that evidence-based interventions are implemented in less than 50% of projects in worldwide⁵. Feasibility to implement those evidence-based interventions certainly should be evaluated in individual project. However, the practitioner's compliance to recommendation, in another word, our negligence to evidence should not be the factor to hinder the implementation of these interventions.

⁵ Refer to above Jones, G et al. (2003). "Child survival I. Where and why are 10 million children dying every year?" *Lancet* **361**: 2226-2234.