

CHAPTER 4

DISCUSSION AND CONCLUSION

4.1 Discussion

The project “Face to face education for village health volunteers on Directly Observed Treatment Short-Course (DOTS) in new smear positive pulmonary tuberculosis patients” was conducted to help these infectious TB patients to continue anti-TB drug medications until they are cured from the disease. It also aimed at reducing MDR-TB problems as well as to reduce the cost of transportation for patients who live far away from TB clinic. The 5 main criteria of DOTS based on standard guidelines of WHO have to be well monitored in every stage to achieve the success of project. In general, government was able to simply manage the problems in regards to 4 of the 5 criteria. The only problem most difficult to solve of the previous operation of Roi-Et province, was the recruitment of supervisors (or direct observers) to monitor patients’ medication in the direct observed treatment short-course treatment to ensure than patients actually take anti-TB drugs throughout the treatment period of 6 months.

The training of village health volunteers in this project was aimed to increase their knowledge and ability to work properly. This will help increasing the TB cure rate by integrating it into primary health care in order to encourage people to participate in

Outcome evaluation

After completion of village health volunteer training in each village, the author collected data using checklist developed by the author for the evaluation. The default rate and conversion rate were evaluated and the results are as follows:

Table 3.14 : Evaluation outcomes of weekly patient care performance of village health volunteers during intensive phase.

Week	Number of days and % of visit of TB patients by VHVs in intensive phase treatment						
	5 day		6 day		7 day		n
	Number	%	Number	%	Number	%	
1 st week	0	0	10	22.7	34	77.3	44
2 nd week	0	0	1	2.3	43	97.7	44
3 rd week	0	0	0	0	44	100	44
4 th week	4	9.1	1	2.3	39	88.6	44
5 th week	2	4.5	1	2.3	41	93.2	44
6 th week	3	6.8	0	0	40	90.9	43
7 th week	0	0	0	0	43	97.7	43
8 th week	1	2.3	0	0	42	95.4	43

* 1 patient died of accident since the 6th week.

** Patients did not get anti TB drug.

From Table 3.14, it found that 2.3 to 9.1 percent of village health volunteers visited TB patients more than 5 days a week in which acceptable with goal standard (5 days/week taken TB medicine for DOTS program by health personnel). Village health volunteers who were able to visit the patients totally 7 days a week more than 77.3 percent It was only in the first week that the coverage of visits was less than 80 percent

(77.3%) because some village health volunteers did not understand the procedures clearly.

Table 3.15 : Persons who provides anti – TB drug for patients.

Week	Persons who provides anti – TB drug for patients									
	No. medicine		patient		V HVs		Relatives		Other people	
	No.	%	No.	%	No.	%	No.	%	No.	%
1 st week	0	0	27	61.4	17	38.6	0	0	0	0
2 nd week	0	0	0	0	44	100	0	0	0	0
3 rd week	0	0	0	0	44	100	0	0	0	0
4 th week	0	0	0	0	41	93.2	3	6.8	0	0
5 th week	0	0	0	0	44	100	0	0	0	0
6 th week	1	2.3	0	0	37	84.1	6	13.6	0	0
7 th week	1	2.3	0	0	42	95.5	1	2.3	0	0
8 th week	1	2.3	0	0	40	90.9	3	6.8	0	0

From Table 3.15, 84.1 to 100 percent of village health volunteers visited TB patients whom they were responsible for anti-TB drug treatment. Only in the first week that revealed highest number of 61.4 percent TB patients who took anti-TB drug themselves. Other persons who assisted in charging of TB patients' medication were patients' relatives. Because of them (relatives) get DOTS procedure and want to help the VHV's.

Table 3.16 : The results of weekly monitoring for DOTS treatment

Week	After anti-TB drug treatment				Received help from VHVs		Check DOTS card with drug package		Observation of urine colour	
	Have Side effects		No side effects							
	No	%	No	%	No.	%	Correct	%	Correct	%
1 st week	11	25	33	75	11	100	43	97.7	41	93.2
2 nd week	14	31.8	30	68.2	14	100	44	100	44	100
3 rd week	32	72.7	12	27.3	29	90.6	23	52.3	44	100
4 th week	35	79.5	9	20.5	35	100	43	97.7	42	95.5
5 th week	34	77.3	10	22.7	30	88.2	22	50	40	90.9
6 th week	36	81.8	7	15.9	31	86.1	39	90.6	41	93.2
7 th week	36	81.8	7	15.9	36	100	43	97.7	43	97.7
8 th week	36	81.8	7	15.9	36	100	40	90.9	39	88.6

From Table 3.16, the number of patients who had side effects of anti-TB drug in category 1 treatment ranged from 25 to 81.1 percent. Patients had low sides side effects during the first week. Then the side effects kept gradually increasing ranged from minor symptoms without a need to stop taking medication to severe symptoms that patients had to periodically discontinue the medicines before starting again with small dosage. Most of marking the checks on DOTS cards and urine colour observation were done correctly except for DOTS card checking in the 2nd week that only 50-52 percent was correct.

Table 3.17 : Conversion rate of TB patients at the end of intensive phase of treatment.

Laboratory results	Number	Percentage (%)
Negative	43	97.7
Positive	0	0
Unknown	1	2.3
Total	44	100

Table 3.17 showed that 43 patients had the converted sputum exam from positive to negative ones with the conversion rate of 97.7 percent. The sputum exam result of one patient (2.3 percent) was not available as the patient died of accident before the completion of intensive phase. No patients absent from the treatment for longer than 2 months (default rate).

Impact evaluation

Impact evaluation, which will be submitted to offices at provincial level on a later date, involves the continuation phase of the project and long-term impacts such as the cure rate and default rate will be evaluated.

the project and realize the problems they encountered. Total of 44 patients was selected from 5 districts. 88 village health volunteers were selected on voluntary basis and they had to take pre-test before participating in the face to face education. After the training, village health volunteers were assigned to supervise and monitor TB patients' anti-TB medication throughout the intensive phase of treatment. Then they took post-test in order to compare the mean scores with the pre-test results. The author followed up and checks performance of health volunteers periodically. The result of knowledge as follow : sample numbers of 88 village health volunteers were tested for their TB knowledge. It found that all village health volunteers had pre-test mean scores equal to 5.20 (S.D = 1.81) and post-test mean scores of 6.46 (S.D = 1.57). The post-test mean score was higher than pre-test with the different mean score of 1.261 (S.D= 1.991), which is significantly different with P value of 0.000 at 95 percent confidence interval. The mean difference ranged from 0.839 to 1.683. Compared knowledge with both groups of village health volunteers have an increased value of mean difference at 95 percent confidence interval. First group of health volunteers had 95% mean difference of 0.460 to 1.584 and P value = 0.001. In contrast, second group of health volunteers had 95% mean difference of 0.855 to 2.144, and P value < 0.001.

From the result, face to face education on DOTS for VHVs supervision the new smear positive tuberculosis significantly had increased their knowledge. Therefore, it is leading to well DOTS practice and decrease mortality and incidence rate for long term.

The outcome of direct observation of the short treatment showed that health volunteers were capable of performing well and adequately on their jobs. This resulted

in an increase of conversion rate up to 97.7 percent which was in accordance with the set standard criteria of the WHO, which set at greater than 85%. In this circumstance of higher conversion rate, it will help evaluating the cure rate in further phases.

Some periods of project evaluation was delayed because of anti-TB drug side effects in some patients. They had to stop using ant-TB drug periodically, which affected the evaluation of treatment outcomes.

4.2 Conclusion

The aim of this project was to develop tuberculosis control works especially for new smear positive pulmonary tuberculosis patients who are considered as the source of infections to be completely cured from the disease. This will also increase disease cure rate as a whole for Roi-Et Province, according to the guideline set by WHO. The project was conducted using face to face education for village health volunteers on directly observed treatment short-course (DOTS) for new smear positive tuberculosis patients and integrated into primary health care works so that health volunteers acquire knowledge and better understanding to perform their assigned works properly. Summary of the study outcomes are as following.

1. Total of 88 health volunteers attended face to face training and was divided into 2 groups from the overall 5 districts. They were assigned to do pre and post tests with an interval of 2 months to evaluate knowledge of all groups

and compare the differences of their knowledge level before and after training. It was found that all groups significantly had increased knowledge.

2. Majority of health volunteers completed their works very satisfactory throughout the 2 months period. Percentage of health volunteer not lowest attendance of 5 day/week, 7 days/ week more than 77. percent.
3. Treatment outcome could be evaluated only for conversion rate, which found to be high as 97.7 percent. There was 1 patient (2.3 percent) died of an accident before completion of the 2 months treatment period.