

Chapter 6

Conclusion

6.1 Conclusion

This is the cost-effective analysis of the vision screening program in schools under the Bangkok Metropolitan Authority. The objectives are to compare the CER among alternatives of different screening tests and different methods of eye care delivery.

The results of this study show that the CER of the alternative using combined VA plus stereopsis tests and providing mobile team is 1,877.36 Baht; the CER of the alternative using combined VA test alone and providing mobile team is 1,823.32 Baht; the CER of the alternative using combined VA plus stereopsis tests and refer the patients is 1,822.95 Baht; and the CER of the alternative using combined VA test alone and refer 1,788.11 Baht. The differences are not large. When taking the false negative consideration, alternatives that use combined VA and stereopsis tests result in 20% lower in the false negative. Thus, the alternative 3, which use combined VA and stereopsis tests and refer the screen positive students to the available health care facilities is the alternative of choice.

False negative is important for the screening program because it can induce a false sense of security to the false negative cases. Thus, false negative rate should be considered along with the CER. The false negative can be reduced by increasing the sensitivity of the screening test or by increasing the frequency of the screening.

Sensitivity study shows that referral compliance is very important in the school vision screening program. If compliance rate is increased for about 10%, the CER for the alternatives that refer the patients decreases for about 6%.

Comparing to the available data from other country (Konig & Barry, 2002), the CER of the school vision screening in Thailand is significantly less than that of

Germany. The policy makers may feel comfortable to expand the school vision screening program to other provinces.

6.2 Policy Recommendation

The school vision screening program is the preventive program that can help in early detection of visual abnormalities and eye diseases in school children. The CER of the program is not high. The policy maker should consider incorporating the school vision screening program into national health prevention and promotion program.

When expanding the program to other provinces, some parameters will certainly change affecting the cost-effectiveness. From interviewing with the program coordinator, the ophthalmic equipment used in the mobile team is borrowed from several sources, and the health care personnel are volunteers recruited from public hospitals to participate the program. With the limitation of the equipment and personnel, it could be expected that when expanding the program, the opportunity cost of the mobile team will increase markedly. The alternatives which refer the screen positive students to the available health care facilities (alternative 3 and alternative 4) are more appropriate. Although the alternative using combined VA plus stereopsis test and refer the screen positive students (alternative 3) has 2% higher CER than alternative 4, the alternative 3 has 22% less false negative cases. Thus, alternative 3 should be the alternative of choice.

One information that is useful for the consideration of the expanding the school vision screening program to other provinces is the cost information. From the data of this study, to run the program using combined VA and stereopsis tests and refer screen positive students to the health facilities, the program needs fixed cost of 760,508 Baht and the variable cost of 29.24 Baht per student.

When implement the program, there should be measures to increase the referral compliance rate. The examples are providing the eye health education to the parents, monitoring for the referral behavior by the school teachers, communication between schools and the parents and the hospitals. These multiple measures may increase the referral compliance of the parents.

From this study, about 22% of the families could not spend extra money without difficulties. This group of people may have problems if their children are screen positive. Although the eye examination fee and treatment expenses are covered under the 30-Baht scheme, the traveling cost, income forgone and cost for eye glasses are not covered. There should be some mechanism to help supporting for these expenses for the families in needed.

6.3 Limitations and further studies

This study has the limitation in that it is performed in Bangkok. The scope of the study is within the schools under BMA participating in the SFK program. Care should be taken to expand the results to other regions.

Results from the study shows that referral compliance is the important factor for the school vision screening program. Further studies on the barrier to access to the health care facilities, factors affecting the referral compliance behaviors should be performed. There should be pilot studies when expanding the school vision screening into different communities.