Chapter 6

Conclusions

6.1 Summary

6.1.1 Objectives

1. To estimate and compare the number of dentists and dental
    nurses needed in the future (using manpower requirements in the
    year 2030 for illustrative purposes) to treat dental diseases in the
    Thai schoolchildren, based on the traditional normative dental
    health need method and two adjusted health need models, based
    on the sociodental approach and the annual estimated incremental
    increase in dental caries.

    → The number of dentists and dental nurses required to treat
       Thai schoolchildren by the year 2030 varied by methods of
       calculation

    → The number of dentists needed in Model 1, the model based
       on the entire normative need alone was 5,793 dentists. The
       three scenarios based on the entire normative need
       incorporated with the sociodental approach produced
       requirements of 4,996, for Scenario 1 (areas with a DMFT of
       0.2 to 1.8), 5,521 for Scenario 2 (areas with a DMFT of 0.5 to

2.2) and 5,949 dentists for Scenario 3 (areas with a DMFT of 0.8 to 3.1), respectively. Model 3, incorporating incremental need and not normative need with the sociodental approach produced a manpower requirement of 1,418 dentists.

→ The dental nurse requirement in different models of calculation conformed to the dentist estimates. Model 1 estimated 6,585 dental nurses. Model 2 estimated 6,010, 6,585, and 6,650 for scenarios 1, 2, and 3, respectively. Model 3 estimated 1,769 dental nurses.

2. To review the trend of change in the gender proportion of dentists in Thailand, and to compare the time spent by each gender on specific dental tasks.

→ A trend towards a female majority dental profession in Thailand has been clearly displayed.

→ The mean time spent per treatment varied from 13.46 ± 7.37 to 176.27 ± 117.38 minutes depending on the types of dental work. No significant differences were found in the time spent on different types of dental treatment between male and female dentists.

→ The average number of days absent from work reported by male and female dentists were 25.7 ± 24.4 and 26.8 ± 30.5 days, respectively. The mean overall number of days absent from work between male and female dentists was not significantly different. This study did not find any significant

difference between reasons for absence from work between male and female dentists, except for child delivery and maternity/paternity leave.

3. To estimate, over the next 30 years, the number and proportion of dentists and dental nurses that will be required to treat and maintain the dental health needs of children in the Thai school system.

→ For the situation where delivery of all dental treatment in schoolchildren would be by dentists alone, 5,793, 4,996, 5,521, 5,949 and 1,418 dentists would be required, as estimated by Model 1, Model 2 scenarios 1, 2 and 3, and Model 3, respectively.

→ If half of the students who needed restorations, extractions, sealants, and scaling were appointed to be treated by dental nurses, dentist estimates in the different scenarios would be changed to 3,395, 2,810, 3,175, 3,458 and 788, respectively. The number of required dental nurses in the corresponding Models and scenarios were 3,293, 3,005, 3,195, 3,326 and 885, respectively.

→ If all students who needed restorations, extractions, sealants, and scaling were appointed to dental nurses, the number of dentists needed would be reduced dramatically. The estimates for Model 1, Model 2 scenarios 1, 2 and 3, and Model 3 were 1,151, 714, 938, 1,116, and 164, respectively. Estimates for

dental nurses were 6,585, 6,010, 6,389, 6,652, and 1,769, respectively.

6.2 Conclusions

6.2.1. Dental manpower calculated by using normative need alone yields very high estimates of dental manpower.

6.2.2. Including sociodental approaches into traditional health need method is more relevant in concept and makes the estimation more pragmatic.

6.2.3. Incorporating sociodental approach into the annual incremental normative need could produce a requirement of a minimum number of dentists to stabilize dental disease prevalence over time.

6.2.4. Changes in gender proportion between male and female dentists have been observed over the last 30 years,

6.2.5. No difference between male and female dentist productivity was observed in this study.

6.2.6. By delivering some dental tasks by dental nurses, the number of dentists required to treat schoolchildren in the year 2030 was decreased.

6.3 Implications and Recommendations

6.3.1. This study suggests that incorporating sociodental approach and annual incremental normative need into traditional health need models produces more appropriate estimates of future dental

manpower requirements than those calculated from normative need alone.

6.3.2. Although differences in productivity between male and female dentists could not be found from this study, it is highly possible that such differences may be detected in the future. Health manpower planners should be aware of and incorporate this factor into the future dental workforce planning system.

6.3.3. Production of dentists and dental nurses should be planned in close coordination because there are many kinds of dental tasks that dentists and dental nurses can switch to each other. It is possible to save time and resources for dental manpower production by good planning for the numbers of dentists and dental nurses that are to be produced.