

Projected number of baby carers needed for Thailand during the next two decades (1995-2015)

Pintusorn Hempisut, M.Sc., Tipawan Isarapathanasakul, M.Sc.
Bureau of Health Policy and Plan, Ministry of Public Health, Thailand

Abstract

Thailand has gone through rapid socio-economic changes with rapid urbanization and industrialization within the past three decades. These changes affect babies caring behaviour. More and more people, especially in the urban area send their baby to day care centre during the day time. Nevertheless, more than 85% of babies are still taken care of at home by their parents or relatives.

We analyse the situation of baby care in Thailand, and with some basic data plus assumptions, calculated a need of 170,871-256,306 baby carers in the year 2015, more in the urban than in the rural area. However, we proposed that the best model for baby caring is still home baby care, and government should come in not only to control and standardize carers, but especially also in supporting home and community baby care through employment policy, and financial as well as technical supports.

Key words baby carer, projected manpower projection, baby behaviour.

Introduction

During the past three decades, the Thai economy grew at an average of 7% per annum, especially during the **past decade the annual growth rate rose to double digits figure**. This rapid economic growth was accomplished through rapid export led industrialization, making Thailand a lower middle income country⁽¹⁾, according to the World Bank. This rapid economic growth and industrialization also came along with many socio-cultural changes. Rapid urbanization, migration of agriculture workforce into the industrialized area, breakdown of strong family tie and local community culture, and epidemiological transition are quite evident⁽¹⁾. The number of nuclear families increase at the expense of extended families. This social change affect baby and elderly care behaviour in the Thai society. Parents have less time to take care of their young children. More and more babies are sent to day care centres during the working hours, especially in the urban and industrial region. The need for good quality day care centres close to home or work place manned by well trained carers is evident. Planning for such good quality baby care system require information on the number of carers needed as well as its supporting system.

Objective of the study

To estimate the number of baby (0-2 years old) carers needed, at home or day care centre both in rural and urban area, for Thailand during the next two decades (1995-2015).

Methodologies

1. **Situational analysis** : Through review of literatures, legal and official documents, discussions with experienced personnel, and telephone survey, the number of babies (0-2 years old) in the next two decades, the baby caring behaviour and situation as well as training for the carers are analysed.

2. **Brainstorming** : By setting up an experienced working group to advice on the result of situational analysis and recommend appropriate assumptions for estimation of the baby carers needed.

3. Estimation on the number of baby carers needed

Through basic data and assumptions with appropriate formula, the number of baby carers needed are calculated.

Definitions

1. Baby

In this study, baby include 0-2 years old, including new born babies up to the age of 2 years 11 months and 30 days. Babies older than this age can be brought to pre-kindergarten or kindergarten schools.

2. Baby carers

In this study, baby carers means

2.1 Close relatives including parents

2.2 Untrained baby carers both at home and at day care centre.

2.3 Trained baby carers (legal or illegal) both at home and at day care centre.

Result of the study

1. Situational analysis

1.1 Projected number of 0-2 years old babies

Using projected figures from NESDB (National Economic and Social Development Board)⁽²⁾, and the UN World Urbanization Prospect⁽³⁾, This study aims at estimating carers in 2.2 and 2.3 only adjusted by figures from Birth Certificate⁽⁴⁾, the number of 0-2 years old babies in the next two decades were estimated both for rural and urban areas, as shown in table 1. It is clear that migration and rapid urbanization affect the increase and reduction of number of babies in the urban and rural area respectively.

Table1. Projected number of 0-2 years old babies, 1990-2015

Year	Number of babies		
	Urban	Rural	Total
1990	732,000	2,566,000	3,298,200
1995	822,503	2,415,697	3,238,200
2000	899,079	2,211,921	3,111,000
2005	983,354	2,023,846	3,007,200
2010	1,062,245	1,832,155	2,894,400
2015	1,136,263	1,655,537	2,791,800

Source 1. NESDB, **Projected Thai Population**, 1990-2020 : 17-19
2. UN, **World Urbanization Prospect** (1993)

1.2 Type and number of Day care centres

Day care centres exist both in the public and private sector⁽⁵⁾.

The public day care centres belong to Ministry of Education, (Office of National Primary Education Commission and Department of Religious Affair), Ministry of Interior (Department of Community Development), and Ministry of Public Health (Department of Health). Almost all the public day care centres **look after children 3-6 years of age**, or preschool children. In 1995, only 28 day care centres, under Ministry of Public Health, accepted babies 2 months-2 years of age, with the total of 340 babies. (Table 2)

Setting up private day care centres need license from either Ministry of Education (in case of kindergarten school) or Ministry of Labor and Social Welfare⁽⁶⁾. Under this system, a standard ratio between carers and babies are set at 1:5, 1:10, 1:20 for babies 0-2 years, 3-4 years, and 5-6 years of age, respectively. For day care centres that look after 0-2 years babies, graduated nurses are needed. There were 90 legal private day care centres accepting 0-2 years old babies, in 1995 with the total of 1,350 babies (table 2). Empirical evidences from responsible officials reveal many non-licensed day care centres, taking care of 0-2 years old babies.

These figures as compare to the number of 0-2 years old babies projected in table 1 can be interpreted that most of the babies are taken care of at home or in the non-licensed day care centres.

Table 2 Situation of baby day care centres, kindergarten and baby carers in Thailand (1995)

Institute	Age (years)	No.of centres kindergarten	No.of babies	No.of baby carers
Public day care centres owned by				
Ministry of Education				
Office of the National Primary Education Commission.	4-6	31,402	1,189,635	NA
The Religious Affairs Department	3-6	3,521	198,672	13,546
Ministry of Public Health, Department of Health				
Health Day Care Centre	2 m.-2 yrs.	28	340	NA
Nutrition Centre	3-5	823	29,050	NA
Ministry of Interior				
The Community Development Department	3-6	5,578	259,200	11,985
Private day care centres licensed by				
Ministry of Education				
Office of the Private Education Commission	3-6	2,301	503,257	20,806
Ministry of Labor and Social Welfare				
Department of Public Welfare.	3-6 Yrs	1,120	74,697	NA
	0-2 Yrs	90	1,350	NA
National Woman committee.	3-6	30	NA	NA
Total		44,079	2,256,236	46,337

Source : Personal Communication with responsible officials at each institute

1.3 Training of baby carer

Setting up schools for training of baby and elderly carers need license from the Ministry of Education ^(7, 8), and require standard curriculum ⁽⁹⁾.

Numbers of schools and trainees are very confusing. The figures from Ministry of Education and from supplementary telephone survey in 1996 revealed a little more than 20 schools with only around 1,000 trainees. Many of these trainees are trained only for elderly care.

Nevertheless, empirical evidence suggested that there are many untrained carers as well as many carers trained in non - licensed schools ^(6, 8). These untrained and illegally trained carers outnumber the legally trained ones.

1.4 Baby caring behaviour

A study in the Northern Capital of Thailand, Chiangmai, by Dr.Kur Wongboonsin in 1992 ⁽¹⁰⁾ revealed the baby caring behaviour in urban and rural area (Table 3).

Table 3 Baby caring behaviour in Chiangmai, 1992

Care provided by	% of Caring behaviour	
	Urban	Rural
Mother	56.9	77.8
Relatives	20.1	14.0
Home Carers(Helper/Maid)	2.6	0.0
Day Care Centre	20.4	8.2

Source : Kua Wongboonsin, (1992)

1.5 Baby caring situation

From the above evidences, the situation of baby caring in Thailand was formulated as shown in Fig1 .

Most of the babies (more than 90% in rural area, and 80% of urban babies) are taken care of at home by parents and relatives, few of them by employed and untrained maid. Some of the babies, less than 10% in the rural and around 20% in urban area, are cared by legal and illegal day care centres under trained and untrained personnel.

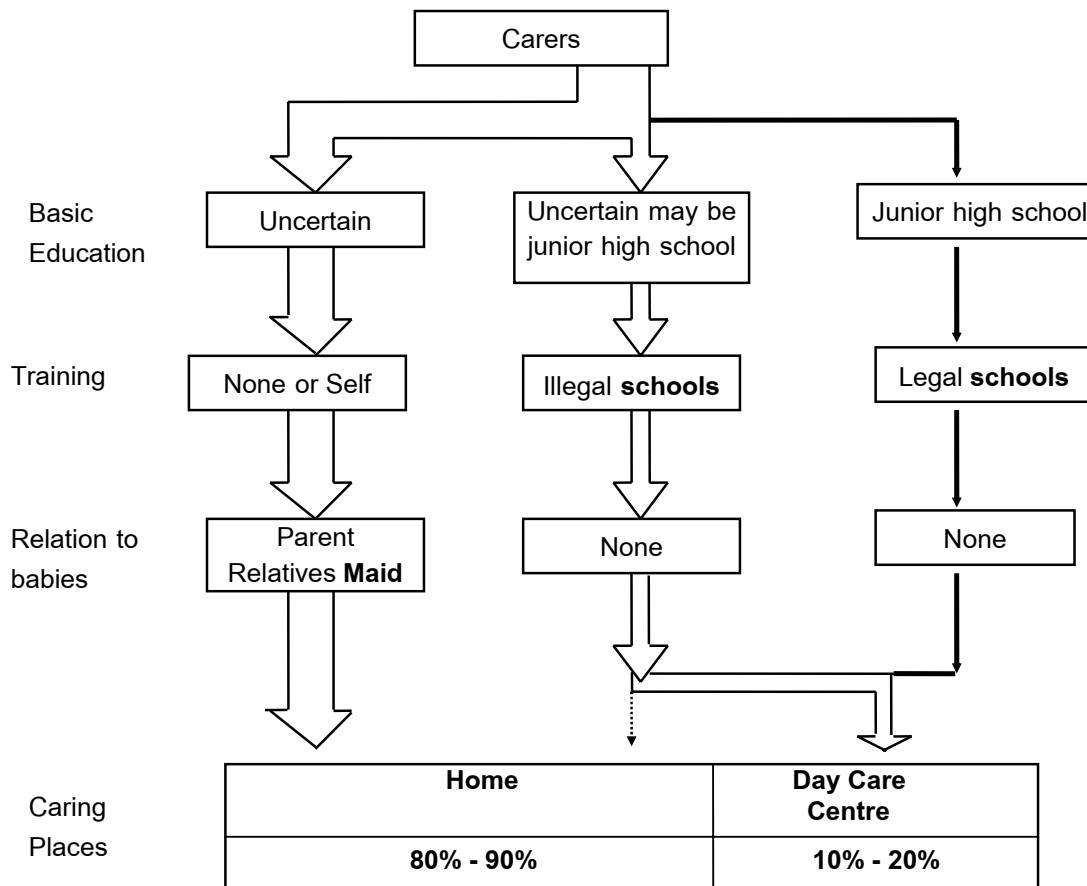


Fig.1 Baby caring situation in Thailand, 1995

2. Assumptions for further calculation

2.1 Future baby caring behaviour

We assumed that, in the next two decades, the proportion of institutional care will gradually increase from 20% to 40% - 60% in the urban area, and from 8% to 20% - 30% in the rural area.

Proportion of babies being cared at home by hired maid will decrease due to higher labor cost and the difficulties in finding maid, and we assume that they decrease from 3% to 1% in urban area.

2.2 Ratio of carer to babies in day care centre

Due to the increase expectation by parents, the ratio of babies to carer in day care centre will decrease from 5:1 to 4:1.

These two assumptions are displayed in table 4.

Table 4 Assumption for calculating baby carers

Year	babies:carer ratio (institute)	Urban			Rural		
		Home care (PS)		Day care centre (PN)	Home care (PS)		Day care centre (PN)
		Total (PS)	Hired carer* (PH)		Total (PS)	Hired carer* (PH)	
1993	5 : 1	0.80	0.030	0.200	0.920	0.000	0.080
1995	5 : 1	0.80	0.030	0.200	0.900	0.000	0.100
2000	5 : 1	0.70-0.75	0.025	0.250-0.300	0.850-0.875	0.00025	0.125-0.150
2005	4 : 1	0.60-0.70	0.020	0.300-0.400	0.800-0.850	0.0005	0.150-0.200
2010	4 : 1	0.50-0.65	0.015	0.350-0.500	0.750-0.825	0.00075	0.175-0.250
2015	4 : 1	0.40-0.60	0.010	0.400-0.600	0.700-0.800	0.001	0.200-0.300

* baby : carer ratio in home care is 1 : 1

3. Calculating formula

The formula for calculation of the needed number of baby carers is :-

$$N = (Uc*PS*PH) + (Uc*PN/RN) + (Rc*PS*PH) + (Rc*PN/RN)$$

$$N = N1 + N2 + N3 + N4$$

Uc = Urban population 0 - 2 years.

Rc = Rural population 0 - 2 years.

PS = Proportion of home care.

PH = Proportion of Hired carer at home

PN = Proportion of day care centre

RN = Babies : Carer ratio

N = Number of baby carer

N1 = Number of urban hired home baby carers.

N2 = Number of urban carers needed at day care centres.

N3 = Number of rural hired home baby carers.

N4 = Number of rural carers needed at day care centres.

4. Projected number of baby carers

From the above formula, assumptions in Table 4, and figures from Table 1, The number of baby carers needed in urban and rural areas in the next two decades were estimated as shown in Table 5 and figure 2-3.

More than half of the babies, especially in rural area, will still be taken care of by their parents and relatives. Those taken care by day care centre, during day time of course, will need 196,403-294,604 carers. Approximately forty percent of these carers will be in rural day care centres, where as sixty percent will be in urban centres.

Table 5 Projected number of baby carers in the next two decades.**1. Urban areas**

Year	Home carer (N1)			Institute carer (N2)		
	max.	min.	avg.	max.	min.	avg.
1995	19,740	19,740	19,740	32,900	32,900	32,900
2000	16,858	15,734	16,296	53,945	44,954	49,450
2005	13,767	11,800	12,784	98,335	73,752	86,044
2010	10,357	7,967	9,162	132,781	92,946	112,864
2015	6,818	4,545	5,682	170,439	113,626	142,033

2. Rural areas

Year	Home carer (N3)			Institute carer (N4)		
	max.	min.	avg.	max.	min.	avg.
1995	0	0	0	48,314	48,314	48,314
2000	484	470	477	66,358	55,298	60,828
2005	860	809	835	101,192	75,984	88,543
2010	1,134	1,030	1,082	114,509	80,157	97,333
2015	1,324	1,159	1,242	124,165	82,777	103,471

3. Total

Year	Home carer (N1+N3)			Institute carer (N2+N4)		
	max.	min.	avg.	max.	min.	avg.
1995	19,740	19,740	19,740	81,214	81,214	81,214
2000	17,342	16,204	16,773	120,303	100,252	110,278
2005	14,627	12,609	13,618	199,527	149,646	174,587
2010	11,491	8,997	10,244	247,290	173,103	210,197
2015	8,142	5,704	6,923	294,604	196,403	245,504

Fig. 2 Trend of baby carers needed during the next two decades.

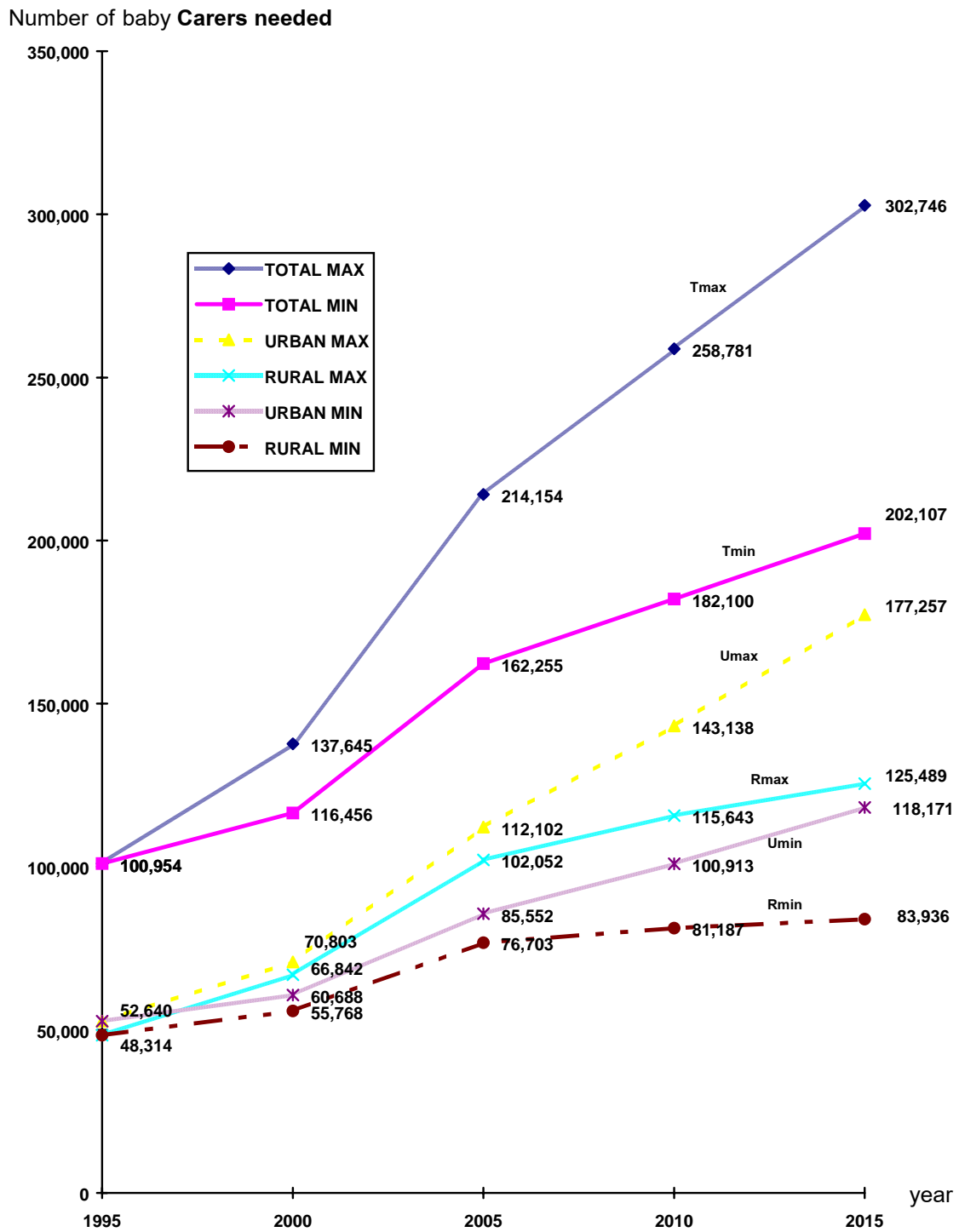
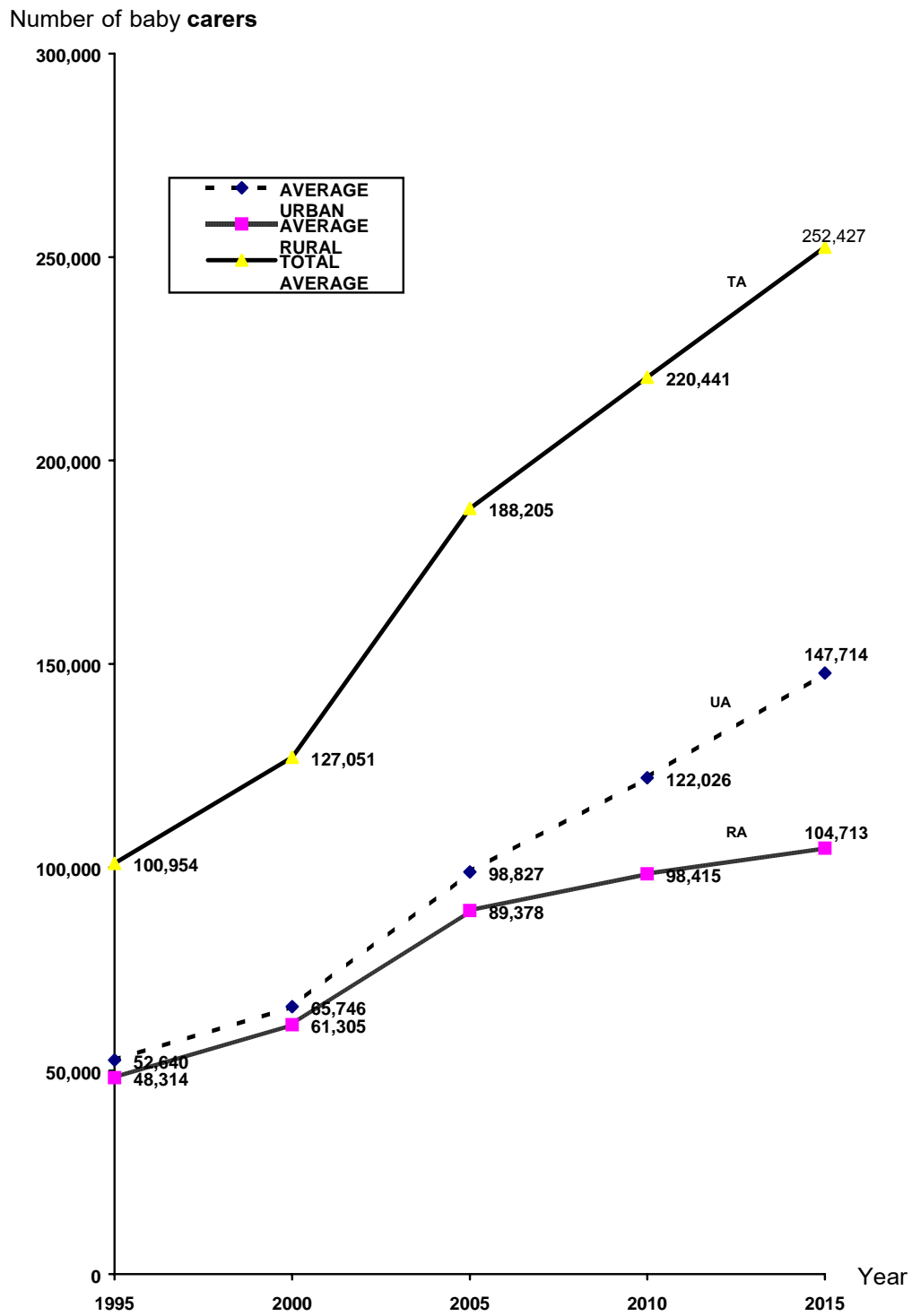


Fig. 3 Average figures of baby carers needed during the next two decades



Conclusion and Discussion

Due to rapid economic growth, many social changes including baby caring behaviour occurred in Thailand. Nevertheless, although more people send their babies to day care centres during the day time, especially in the urban area, more than 85% of babies are still taken care of at home by their parents and relatives. It is postulated that this proportion of home self baby care will decrease during the next two decades due to rapid economic growth and urbanization.

Projection on the number of baby carers needed in the next decades was estimated by projecting the number of 0-2 years old babies and set-up assumptions on baby caring behaviour. The result yielded a number of 202,107-302,746 carers needed, more in the urban than the rural areas.

Although the trend towards baby care at day care centre is increasing, we believe that home baby care by parents and relatives give the warmest relationship and the best environment to support baby development.

We propose that government should develop clear policies to support home baby care which will also support breast feeding. Some examples of these policies are longer maternity leave, financial support for near home or near workplace day care centre, support for community baby care by retired elderly or non working housewives in the community, technical support through home visit by public health nurses, and support for training of baby carer at the community level. It is possible in the urban community, especially in urban slum or real estate development project, to set up community services taking care of babies and the handicapped manned by active retired elderly or non working housewives, with financial support from both the community and the government.

References

1. Suwit Wibulpolprasert, **Health system of Thailand in the next two decades**, in **“Health manpower projection for Thailand during the next two decades”**, Bangkok : Health systems Research Institute, 1996.
2. NESDB, **Projected Thai Population 1990-2020** : 17-19, Bangkok : Office of Prime Minister, Thailand, 1992.
3. **World Urbanization Prospect, The 1992 Revision, New York : United Nation** 1993.
4. **Community Day Care Centre 1-2**, Bangkok : Sukhothaimathiraj University, 1994.
5. Children and adolescent Welfare Division, Department of public welfare, Ministry of Labor and social welfare. (Personal communication)
6. **Private School act**, Bangkok : Ministry of Education, 1982.
7. Office of the Private Education Commission, Ministry of Education. (Personal communication).
8. **Standard curriculum for child carer (0-6 yrs.)**, Bangkok : Family Health Division, Department of Health, Ministry of Public Health, Thailand, 1995.
9. Kur Wongboonsin, et al., **Child care in Thailand, determinants and health consequences for preschool children, 1992**, Institute of Population Studies, Chulalongkorn University : 6