

**Human Resources for Health Planning:  
A Review of the Thai Experience**

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**Introduction**

One of the most commonly asked questions in health development in Thailand is how many doctors we need. Next to it is the question of how we could distribute doctors to the rural areas. In the field of health planning in Thailand, apart from the use of various kinds of epidemiological data, the most systematic and time consuming step in planning was the estimation of human resources for health (HRH) requirement. That was mostly because people were quite concerned about the number of certain categories of HRH we had, such as in the case of doctors as we always saw packed public hospital outpatient departments and heard complaints about long waiting time when going to public hospitals. The logical conclusion was lack of health personnel to serve the people and the next immediate step was trying to produce more personnel to meet the requirement. But as most planners knew that HRH production is a high cost investment we had to ensure the rational use of resources by trying to determine the appropriate number that would be needed. Thus the need for the logical step to estimate the requirement.

In response to this concern and need for rational planning in HRH, the World Health Organization produced the guidelines on HRH planning with the South East Asian Regional Office supporting countries in the region to improve mechanisms and practices for HRH planning<sup>(1)</sup>. After more than a decade of efforts, a review of HRH planning activities at the country level found that there was bias towards quantitative orientation in the plan with little emphasis on the qualitative aspect<sup>(2)</sup>. Moreover in the 40th Anniversary report of the WHO, the concern was expressed on the shift of emphasis at the global level on the issue of HRD. It was observed that during the 40 year period since WHO establishment the emphasis has shifted from emphasizing more health personnel to cautioning on a possible HRH imbalance that may be detrimental to the national health development given the nature of certain categories that may induce demand and thus create unnecessary demand for excessive provision of services. From the belief that there was some optimal ratio of doctors or nurses to population, it became clear that such an optimal figure is very much context specific and could vary even within one country at different periods of time. From the belief that the more HRH the better, as time progressed it became cleared that HRH balance would be more desirable regardless of whether the country could afford it or not.

In Thailand the emphasis on the number of certain categories of HRH began from the first five year plan in 1961. The goal was later set at 1 doctor to 5000 population in the third five year National Economic & Social Development plan (1972-1976). One of the clear targets in the five year health development plan during the early period was increasing the number of doctors and nurses. There seemed to be a certain improvement in terms of HRH to population ratio both at the national level as well as at the regional level. However the number of HRH is always far from

adequate judging from the crowded public hospitals that have persisted ever since the first five year plan. Apart from certain periods when the government had difficulty with the budget due to economic constraints, the emphasis has always been on more doctors and nurses to fill the needs of the country and the public sector hospitals. However it has also become clear that something else besides proper HRH planning might contribute significantly to the improvement of the HRH situation here in our country.

### Health HRH Planning Experiences in Thailand

Prior to 1977, Thai health development plans mentioned the need for more doctors and nurses and estimated the need base on what was believed to be the ideal or desirable HRH to population ratio. When WHO introduced the guidelines in 1980, a team from Thailand was included in the efforts to propagate proper planning methods consisting of three major components, requirement estimation, supply projection and then matching of demand and supply<sup>(3)</sup>. The subsequent detailed plan would then be formulated based on the results of the three steps mentioned. Since then HRH exercises have been carried out with the aim to better rationalize the HRH production part. HRH production in Thailand falls under the responsibility of the Ministry of Public Health as well as the Bureau of University Affairs. As the Ministry of Public Health was responsible for health planning, but could not adequately affect operations under the responsibility of other ministries, the first HRH plan consequently emphasized those categories of HRH produced solely by the Ministry of Public Health. There were 14 categories of HRH covered in that exercise most of which were auxiliary health personnel<sup>(4)</sup> (Table 1).

**Table 1 HRH requirement for the year 2000 from the first Human Resources Plan (HRP) (only within the Ministry of Public Health)**

Category of Personnel	Rural Area	Bangkok				Total
		Existing Number in 1977	Number Required in 1988	Total	Projection for the Year 2000	
Physician	4,221	639	173	812	982	5,203
Nurse	12,222	1,062	892	1,954	2,456	14,678
Pharmacist	789	255	71	326	410	1,199
Dentist	860	59	17	76	96	956
Nurse-Aid	69,839	834	186	1,020	1,282	71,121
Dental Auxiliary	1,294	13	-	13	16	1,310
Health Worker	8,700	946	-	946	1,189	9,889
Midwife	57,808	125	-	125	157	57,965
Lab Technician	860	366	240	606	762	1,622
Health Technician	71	106	53	159	200	271
Physical Therapist	142	15	10	25	31	173
Nutritionist	71	102	10	112	141	212
Health Educator	71	36	7	43	54	337
X-Ray Technician	718	45	36	81	102	820

Source: Health Planning Division 1979

## **The case of doctor requirement**

As mentioned earlier, the concern over the number of doctors, especially those assigned to the rural areas has always been a priority of the health sector. In 1965, in response to the rural shortage and emigration of doctors, compulsory public service of 3 years was introduced for all medical graduates. After the first six years of implementation this system became a universal compulsory system. At the first it was a voluntary program. If the students accepted the scholarship, they would be exempted from paying the high tuition fees but had to sign a contract in which they agreed to work for the public sector for three years after graduation. However the problem of doctor shortages was far from being solved. After the HRH planning team was established one of its very first tasks was to estimate the requirement for doctors. Since then there have been at least 3 major attempts to estimate requirements of doctors in Thailand. The first one, carried out by the Ministry of Public Health with an aim to setting the first target for doctors production, found that there was a need to increase annual production of doctors if Thailand was to meet the presumably ideal doctor to population ratio set at 1:5,000 at that time. When the government set the target of building district hospitals for every district in the country during the fifth five year plan (1982-1986) it was felt that there was a need to re-estimate the requirement and thus the second exercise was carried out with the proposal to increase the annual production by 200<sup>(5)</sup>. A Health Development Coordination Committee was appointed and the secretariat office established with financial support from WHO in 1982 to handle this policy concern.

In the middle of the fifth five year plan (1982-1986), the country faced an economic crisis and had to cut down on the plan for expansion of district hospital coverage. It was believed that the increase of production agreed upon earlier should not be continued for too long. At the same time the National Conference on Medical Education agreed on not opening any new medical schools in Bangkok and vicinity, which was interpreted as a signal for slowing down the production of doctors. The Medical Council of Thailand which was expected to take care of the issue of licensing doctors in the country was concerned about the debate and possible conflict. It thus established a working group to estimate requirement of doctors in Thailand partly to use as a guideline for decisions on opening of new medical schools as well as to advise the government on proper planning and production of doctors in the country.

When the results of the exercise were presented to the Medical Council, many arguments were raised as the main conclusion stated that there was no need for the country to put too much emphasis on increasing the production of doctors and thus no need to open new medical schools<sup>(6)</sup>. This was seen as the attempt of the Council to limit the supply of doctors for fear of professional competition, with the belief that it would bring better health services to the country. The arguments made were on ideological as well as on technical aspects. Those arguing for the ideological aspect did not see the need for such planning exercise as it was believed that the market would be the best judge. If there was a need for new medical schools and they could afford to establish it with proper educational standards, it was the Council's role to emphasize educational quality, not to determine the need. If there was a surplus of doctors, the feedback would be automatic and thus there would not be any proposal for opening new medical schools. For those who argued on technical grounds it became clear that whatever methods were used to estimate the requirement of doctors

would not be fully convincing. The assumption used and some of the figures employed were attacked as biased and incomplete. The main method adopted then was the mixture of service targets based on the plan for facilities expansion in the public sector along with trend projections of hospital beds in the private sector and then applying teaching work loads and other roles of doctors in medical schools to estimate the requirement of doctors in the medical schools.

There were a few other attempts during the same period aimed at estimating requirements for doctors in different specialties as the Medical Council was trying to ensure that there would be a proper ratio of doctors in different specialties and use the number to determine the number of residency training posts for the future. This made it even clearer to all concerned that such an exercise created more questions than answers. The most basic controversy was on the roles and functions of various specialties and the lack of data available if very detailed types of work would be differentiated. Some examples were the assumptions on the requirement for pediatricians estimated based on the number of cases seen among patients under 13 years old, implying that there was no place for the general practitioners role in this age bracket. The same argument went to the estimation of the requirement for obstetricians based on the expected birth rather than patients needing more sophisticated services. The argument was also on who should be responsible for head and neck surgery, surgeons or ENT specialists. If there would be an attempt to separate the roles of general practitioners and specialists based on case severity, the argument could go on and became very difficult to settle.

That seemed to be the last major exercise involving quite a large segment of those concerned with planning requirements for doctors. However the requirement for and production of doctors never ceased to be the major policy issue. There have always been the issues of whether a new medical school could be justified or more training posts should be allocated for certain specialties or sub-specialties and how to base such decisions. The major stand of the Medical Council and most medical schools favored the conservative side, with no drastic attempts to increase the annual production but rather to emphasize more on recruiting students from the rural areas hoping that they would go back and serve their localities. During the early 1990s the private sector growth in Thailand brought about a big impact on the public sector. The health sector was also affected and there was a shift of doctors from the public sector thus worsening the situation of service provision in the rural areas. The debate on the optimal number of doctors for Thailand was raised again. This time the emphasis was not based much on the thorough HRH planning exercise, but rather on the assumption that Thailand should look at neighboring countries with comparable economic development levels and thus set the target for the ratio of health professionals to population, accordingly. The ratio in Malaysia and Singapore, as well as Korea, were used as benchmarks for the Thai situation. There was no need for any planning exercise and the decision seemed to be quite clear from all sides that Thailand needed to produce more doctors. However some exercises were carried out by the Bureau of Health Policy and Planning, in collaboration with the advisory group to the Minister of Public Health, with the conclusion that there would be a shortfall of at least 7,509 doctors if Thailand were to achieve the proper doctor to population ratio by the year 2001<sup>(7)</sup>.

There were two more pieces of work done on a research basis during 1995-1997. These were supported by the Health Systems Research Institute. The first study attempted to estimate the requirement of doctors based on projected service demand and service utilization patterns of both urban and rural populations using a large nation-wide survey on health service utilization<sup>(8)</sup>. The other reviewed the past experiences and tried to adjust certain assumptions and thus modify some figures in the process<sup>(9)</sup>. Both were not presented to a large audience or considered seriously by policy makers as it was already decided without doubt that it will be a long time before Thailand would have to be worried about an excess of supply of doctors.

### **The case of dentist requirement**

The most significant piece of work on dental HRH requirement estimations came about in 1986<sup>(10)</sup> when a technical working group was formed by the Dental Health Division in the Ministry of Public Health. The group consisted of technical staff from the Ministry as well as lecturers from the universities. The rationale behind the attempt was the concern over the lack of dentists to take care of the dental health problems of the population. Prior to the attempt to estimate dentist requirements for Thailand there were two major activities taking place in relation to the attempt to improve the dental health situation of the country. The first one was the national dental health survey which took place every 5 years. The survey showed the major dental health problems that had room for improvement without the need for dentists, i.e., could be handled by auxiliary personnel. Another activity was in 1982-1983, when a pilot project was launched to train health centre staff who were another type of auxiliary health personnel with major roles in sanitation and disease prevention, to help providing dental health services, e.g., scaling, dental education, etc. The project proved that certain jobs usually done by dentists could be handled by the health centre staff. However the results were not well accepted by the dentist profession.

The dental HRH requirement estimation was carried out hoping to find recommendations for the new way to look at various types of dental health personnel with different capabilities, roles and functions. The group adopted the health needs approach combined with service target method. They took the data from the national dental health survey of 1984 and then estimated the types of work required. The group then went on to identify three types of dental health personnel, namely health centre staff, dental nurses and dentists, and defined their respective roles and functions with regard to the already identified service needs of various age groups. The volume of various types of service needs were then adjusted using different target settings. The results were the estimated number of the three types of dental health personnel needed which showed that there was a need for 7,154 dentists, 8,701 dental assistants and 11,296 health centre staff in order to deliver the service targets set forth by the year 2000.

The result was presented in a national conference and received mix reactions. On the one hand the criticism was mainly on the assumptions of the three types of dental health personnel and their expected roles and functions which were quite different from the existing pattern. Even though dental nurses existed earlier, their roles and functions have been modified tremendously taking up some of the tasks of dentists. The controversy regarding health centre staff providing dental health

services remained. On the other hand there was a need for a systematic approach to estimating requirements for dentists and this study provided one example of such estimation and even though many of the roles of dentists could be taken up by other types of dental health personnel there was still a big gap in the number of dentists and therefore was taken as providing some basis for the future production plan. The results of the dentist requirement was used by universities to determine their annual production plan. The proposed role of the health centre staff was never accepted and no training programme was ever developed to allow them to carry out the roles as mentioned in the plan. The role of dental assistants was partially accepted by the Ministry of Public Health by changing their role and posting them at the health centre level to work on their own without having to rely too much on dentists. There are now more than 300 rural health centres with one dental nurse in each center (about 4% of the total health centres).

One of the major lessons learnt was that the attempt to estimate manpower requirements using the need based approach seemed rational but difficult to implement. First of all the volume of services required could be enormous even when adjusted by target setting. Secondly such an approach did not take into account the place where the planned personnel were expected to work thus it made it very difficult to decide where to put them to work. The case of Thailand, where the government played a major role in service provision and demand for services through private sector was still limited, the estimated number based on various assumptions became invalid without the attention of the government. The clear example here was dental nurses. With the new role and function, but limited demand for those services and no prior existence of such personnel providing those services, it was not realistic to assume that the private sector would just take up the idea and start to train and employ these personnel to work as planned.

The group revised their figure once using the new set of survey data in order to estimate the requirement for dentists in 1992 as it seemed to be the only type of dental health personnel well accepted although the demarcation of roles according to the plan was not accepted. There was a similar question about the needs for various specialties of dentists as there was a demand for continuing education from the side of dentists but never responded to by the dentist schools. However such an attempt to estimate the requirement for specialized dentists was never realized. The most recent effort in dental HRH requirements was in 1996 with the support of the Health Systems Research Institute. The result has not yet been presented to policy makers<sup>(11-12)</sup>.

### **The case of nurses**

Estimating the requirement for nurses in Thailand was carried out for the first time along with other categories of health personnel in 1978<sup>(4)</sup>. The objective then was to guide the nurse production plans for nursing colleges within the Ministry of Public Health. Nurses were trained by colleges in the Ministry of Public Health and also by faculties of nursing in universities. On the part of universities, the Ministry of University Affairs set up targets for nurse production by setting expected ratios of nurses to population and then compared them with the production capability existing in each period of the plan and thus never embarked on serious nurse requirement estimations. The same applied for the effort in the Ministry of Public Health with

regards to nurse requirement estimations which were always limited to only the requirement as seen from the Ministry of Public Health's need.

The Ministry of Public Health determined its own needs for nurses in relation to the five year planning period. Such an exercise led to a plan to increase production of nurses and auxiliary nurses (as called then). Towards the beginning of the sixth five year plan (1987-1991), there was a policy to slow down production of nurses as the number of hospitals were not expanding at the rate expected earlier and there was a possibility of shrinking health budget, thus fewer positions for all types of personnel including nurses would be available in the government services. However a new policy came into place expecting nurses to work at the health centre level. The Ministry of Public Health reestimated the requirement for nurses using the facility expansion plan along with the standard staffing pattern for each type of health facilities with nurses. The result was the continuation of increased nurse production by the nursing colleges of the Ministry of Public Health.

The Ministry of Public Health revised the figure for nursing requirements periodically according to the change in the staffing patterns of various types of health facilities in agreement with the Civil Service Commission. However this was limited mainly to the needs within the health facilities of the Ministry of Public Health. The Ministry of University Affairs periodically estimated nurse requirements and set targets for its own production. That approach has been mainly the use of population to nurses ratio, with the ratio be upgraded gradually with each successive exercise. Although there have been attempts to estimate based on a method that might better respond to the needs for services or health problems, they have never been carried out thoroughly. Except for the occasion when the Ministry of Public Health will have to justify its staffing pattern, the estimation of staff requirement based on the types of services expected to provide has never been carried out. More recently the argument for estimating the number of nurses was further complicated by the expectation of the changing roles of nurses being more active and community based rather than just working in hospitals.

The most recent effort to estimate the requirement of nurses was in 1995-1996<sup>(9)</sup> by a working group set up through the joint project under the Bureau of Health Policy and Planning, the Health Systems Research Institute, and the Praboromrajchanok Institute for HRD.

## **What are the real issues of human resources for health development in Thailand?**

### **The problem of HRH distribution**

As mentioned earlier the major issue of HRD in Thailand has always been how to get the highly qualified HRH to work in the rural areas. The most effective means seemed to be the introduction of the compulsory period which applied for all four categories of HRH starting with nurses in the Ministry of Public Health, then with doctors in 1965, and finally pharmacists and dentists in 1984. These measures, coupled with the continuous upgrading of the health facilities and the creation of better working environment and incentive system, have added to the number of these

staff in the rural areas. Although still far from ideal, it has been possible to provide services to the rural population and reduce quite a substantial number of people from traveling into big cities.

In most cases when a working group set forth to estimate the number of health personnel required it has always been due to the concern over the shortage of those personnel in the rural areas. This followed automatically from the belief that once we have been able to determine the number of health personnel required, based on systematic approaches, then it would help to produce more of such personnel and thus reduce the shortage in the rural areas. However as many of these categories of health personnel are quite costly to produce there is a tendency to be more cautious about producing more. It would need quite a strong justification to ask for more resources to produce more such personnel. **However there were also times when decisions had already been made that there was a need for more of certain categories and thus a HRH plan was only expected to confirm that.** If the result came out as contradictory then it was discredited and not used. There were only a few occasions that the HRH plan was carried out without a pre-contemplated decision in mind.

Given the issue of manpower distribution it became doubtful if an attempt to estimate the HRH requirement contributed significantly to the solution of such problems. It would become clear that the situation in the rural areas will have very little to benefit from a HRH plan looking at the overall country situation. There is a need for the plan to specifically focus on the rural areas. The case of the estimation of the requirement of nurses for the health centres in 1988 might have served as a good example that the estimation led subsequently to the decision to produce more nurses rather than slowing down the production. However, most of the nurses never really went to work in health centres due to lack of efficient HRH management mechanisms. In those cases when HRH requirement plan pointed out the need for new categories of personnel to better serve the rural population such as the case of dental health nurses in the dental HRH plan in 1986 the result was received with skepticism and only partially implemented by the Ministry of Public Health.

### **The political tendency to favor increasing opportunities for education**

It seemed common sense for most people to think of increasing the number of HRH whenever encountering a shortage of any kind. This was based on the belief that more HRH will eventually solve the problem even though it is a problem of mal-distribution. When the cities are saturated they will move into the rural areas, or at least that was the assumption. However the tendency to favor more production of HRH became more complex when this became a political tool to attract votes. It was quite common for any politician to want to add new schools of some kind to their constituency, especially if they were schools for producing doctors, nurses or other categories of health personnel. It seemed to be the most tangible thing to show the will to fight the problem of HRH shortages in the rural areas. It also justified itself as increasing education opportunities for the rural population. With the changing political situation, when election was the key element and getting as many votes as possible is the name of the game, it is not uncommon to see the need for evidence that will support the decision to open more new schools or produce more HRH of some kind.

## **Inefficient use of HRH and room for improvement**

It has been quite evident that the centralized civil servants management system is detrimental to the effective utilization of HRH. The civil servant commission determines the number of HRH for various types of health facilities. It also sets the salary scale and the career path, and other incentive schemes. This is based on general civil servants working nature and conditions. Although HRH tend to work in shifts and have to face different working conditions, the incentive system was not flexible enough to cope with the differences. There is little a hospital manager could do to better compensate for a more difficult task or assignment. When the work load became excessive the remuneration stayed the same. When a scale or a set of compensation system was set it took a long time to change them and had to be approved by the central ministry. This leaves hospital managers with very little to do to better attract or more efficiently use the available HRH. This has been another important issue contributing to the shortage of HRH in the rural areas. Some may be posted there during the compulsory service period but very few stayed on after that time due to a more competitive working environment and compensation system in the big cities and in the private sector. Estimating the HRH requirement will not help to improve these conditions. On the contrary **paying attention to create a more flexible and efficient system of HRH management in the civil service might help improve the condition of shortages of HRH in the rural areas.** The benefit is much more immediate compared to the needs for HRH requirement estimation and thus determining the number needed for increased production. **Decisions that affect HRH management may bring more HRH into the system right from the day the decisions were made.** It takes 4-6 years after deciding to increase HRH production to be able to effectively use the personnel resulting from the training.

### **Discussion : lessons learned.**

Considering the experience of HRH planning efforts and utilization in Thailand, we might be able to draw a number of lessons.

#### **1. How much can HRH planning contribute to solving the issue at hand?**

It became obvious that the HRH plan contributed very little to solving the issue of HRH shortages in the rural areas. There were examples when it was expected to contribute to solving problems but the results were not achieved **because of the inefficiency of the HRH management system.** This may not totally be ascribed to the failure of HRH planning. As with any other process of development, the technical methodologies and steps are not the only important parts. The managerial processes are also, if not more, important. The most crucial process needed in HRH planning is the participation of the various stakeholders involved. In this case those managers who are expected to make use of the planned HRH have to be involved at certain steps, the earlier the better. Leaving the work of HRH planning in the hands of HRH planners alone will lead to nullification of the planning efforts. Estimating the requirement is only one step of HRH planning and this may be left with technical people. In many other steps of the HRH plan it would certainly be more beneficial to involve other players at an early stage of the planning processes.

**2. Is there such a thing as an indisputable HRH plan? Is there any method of determining the requirement of HRH that will help to render the results less debatable or more accurate and convincing?** It became clear that even the most logical and rational method of need-based HRH estimation will not help to make the results more convincing or less debatable. There are quite a number of assumptions built into the different steps of requirement estimation, resulting in a situation where even though the starting point may look rational with the use of highly valid and reliable data, the following steps became highly controversial. The most controversial one would be the conversion of services into HRH requirements. There are many ideas as to what types of HRH would be most appropriate to render such services. People tend to be conservative rather than innovative in this respect, especially when professionals are involved. Even in a country like Thailand where protection from different health professionals is not overt, it is still quite difficult to reach an agreement on new categories. Another part of this is the determination of the time required to render a particular service. Actual data on time spent for each service might be collected but there is still a high degree of professional judgment involved as to what would be the appropriate time required to carry it out.

It is worth noting from the methodological point of view that the method employed quite frequently by the Thai was the service target method. Moreover it was a service target method based on service facilities rather than health problems or individual health services. However in many instances there was a combination of methods as data might be available for certain situations but not for others. The service target may apply well with the estimation based on a public sector where plans and targets might be set in advance. In the private sector, service or facilities targets may not be available. The staffing standard also does not exist and thus makes the service target method quite difficult, resulting in a turn to modified demand-based methods. Given the lessons of using the results of the estimation and the lack of proper attention to the process of planning, the issue of which method to be adopted in estimating the HRH requirement seemed to be of lesser importance.

**3. The qualitative aspect of HRH plan.** HRH capability and performance improvement, timeliness and response to problems at hand were not addressed thoroughly in HRH Planning. It was common to find most HRH plan: dealing with the issue of requirement estimation and attempting to match between supply and demand. The result was always on the number of HRH needed for the future and how those numbers could be met. In many instances the issue of HRH performance and productivity were quite important and would affect the number of HRH needed. **In other words if the performance and productivity could be improved, there may be need for less number of HRH.** As the issue of quality, performance and productivity of HRH were quite difficult to address and would require research or special surveys, they were not normally taken into consideration in the HRH plan. This however made the HRH plan less relevant with suggestions only on increasing or decreasing HRH production. A good HRH plan should be able to address the issue of where and how HRH performance or productivity might be further improved. However this might be a matter of methodological deficiency as well as the lack of concern on the part of HRH planners and potential users of HRH plans for further decision making. In other words, decision makers are also more concerned about the

question of whether to increase or decrease production rather than whether to improve performance and how.

**4. How should we increase our production capability? What is the role of the private sector?** Most of the experience of Thailand with using the results of HRH plans has been with the issue of how to increase the production of HRH. Such production used to lie within the responsibility of the public institutions. With the changing economy and the growing private providers, production of HRH has become an issue on whether private educational institutes or even service facilities should have a role to play in HRH production. The issue seemed to be easily resolved considering the fact that there is no restriction on the role of the private sector in higher education. However, considering the fact that HRH production needs quite a large investment questions arise on whether quality might be compromised if put on business basis. Moreover the policy on the compulsory period has helped to distribute certain categories of HRH to the rural areas. Private students would not be bound by such regulations. By creating a double standard of treatment for the public and private graduates in health, the efforts to distribute HRH to the rural areas might be compromised. This has led to the concern over how to ensure that the role of the private sector in HRH production could be promoted to maximally benefit society and not just result in an investment for personal benefits with adverse effect on the present and future efforts in solving the country's priority issue of HRH distribution.

## **Conclusion**

Thailand has undergone quite an extensive process in HRH planning ever since the first worldwide effort was introduced by WHO. After more than 20 years of experience it became clear that effort in putting together an HRH plan based mostly on the need to address the issue of estimating quantitative needs for HRH may prove to be of limited benefit. Among planners the concern has been over which methods could best address the Thai situation. When it came to using the results of the plan the response by potential users was far from satisfactory. This is partly due to the fact that there were quite a number of assumptions built into the plan and not all assumptions were shared by various groups concerned. This is besides the fact that in many cases people expected the plan to confirm or support some of the premeditated decisions. Many of the plans were developed along such thinking by decision makers.

Human resources production is a politically attractive area whereas the real issue of the impact of HRH in Thailand may have little influence from the decision to produce more HRH. This resulted in the decisions and policies to solve HRH shortages be focused around the issue of HRH production and has demanded a lot of HRH plans and requirement estimation exercises. Finding innovative ways of increasing productivity and performance of HRH already available and preventing their dropout from the rural areas might be more appropriate strategies to solve the problem of HRH in Thailand. This requires less effort in HRH requirement estimation but more effort on research on the qualitative aspects of HRH. This may help HRH planners to better look at the real issues of HRD in Thailand and thus formulate more relevant and useful HRH policies and plans.

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