

CHAPTER 6

CONCLUSION AND POLICY IMPLICATION

According to the results in the previous chapter, this conclusion reached in the assessment was follow the objectives. At last of this chapter puts forward some suggestions about this technology diffusion.

6.1 Summary and conclusion

From the results, MRI has been widely used in Thailand compared with other medical imaging techniques, because of factors such as safety (non- radiation). Now MRI is mainly used in neuroimaging.

Some of the limitation in terms of methodology were obstacle in this when considering the numbers of installation. Of 27 such machines located in the whole country, only two hospitals were studied. A further 25 hospitals / centers were still not investigated.

The objective of this study was to describe the performance of MRI technology in aspects of utilization and financing. There are difficulties in assessing the decision making process. There is a problem in defining a suitable outcome measurement.

As pointed out in this study, we found that the number of MRI examination in Bangkok was greater than those outside Bangkok. When considering specific pathological conditions rather than patient needs. MRI had a clear role in neurology including spinal disease.

There are also difficulties with the availability of financial data in the private sector. While major part of this study has focused on costs, and revenue of MRI procedures. Since the analysis was done on cost and revenue, the break- even point of both hospital in this study are less effective (in terms of underutilization).

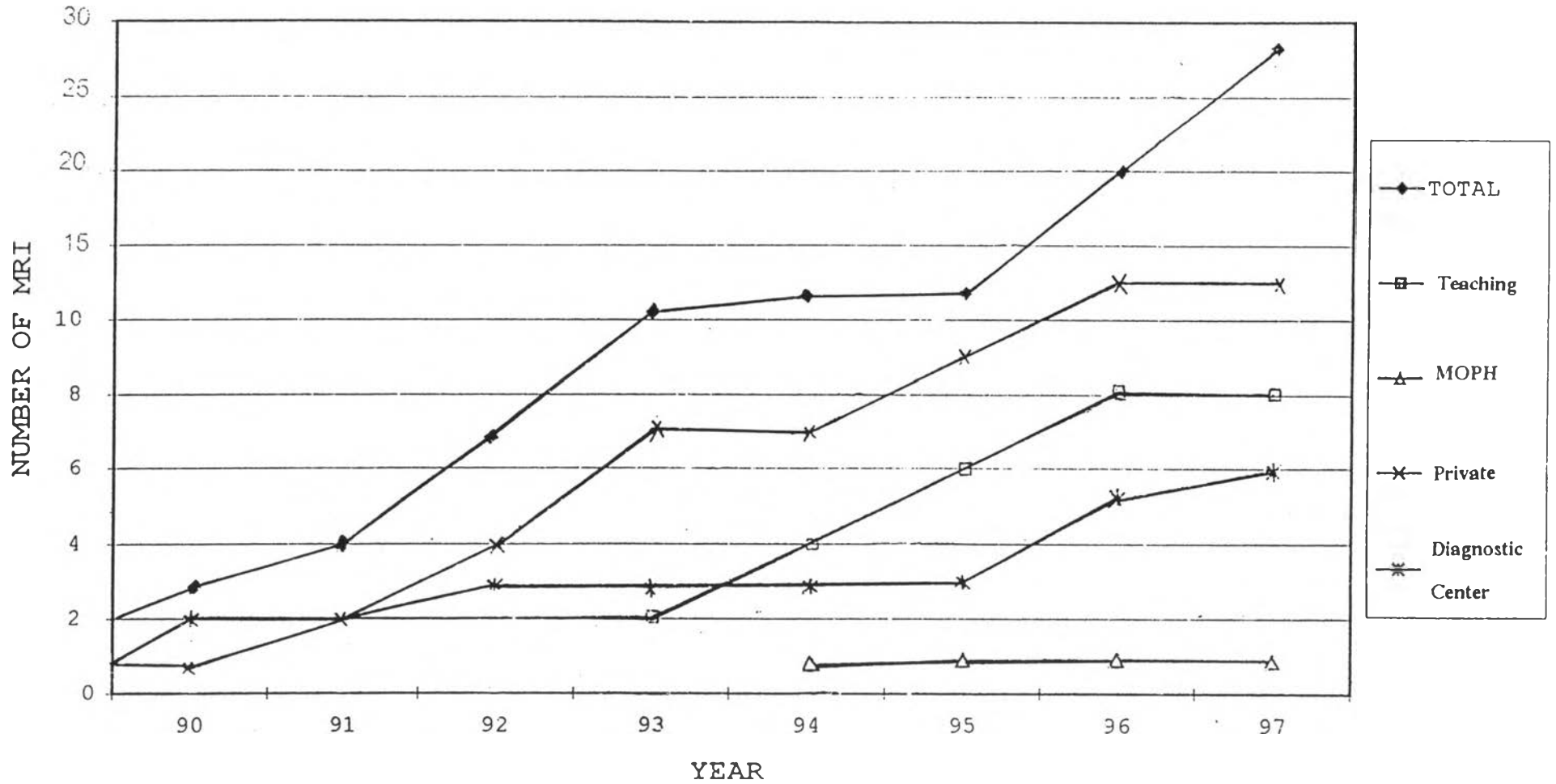
Therefore, it is recommended that, professional hospital, or center, who would like to adopt MRI technology should consider the cost/ effectiveness before adoption the MRI technology, if it should be bared by private sectors.

The analysis of costs and effectiveness is an extremely difficult task requiring the collaboration of radiologist and clinicians. While this study considered only cost and revenue which insufficient information for policy making although it may have impact on the diffusion of MRI.

However, the figure 6.1 show the time trend of MRI diffusion in Thailand. This may suggest that firstly has introduced by private sector last 10 years ago. For the public sector has installed in mid 1993. While

DIFFUSION OF MRI IN THAILAND

- BASED ON UNITS UNDER OPERATION AS OF MID 1997-



the MOPH provision the MRI for MOPH hospital only one unit. Up to now, there are two public and private hospitals have propose to buy MRI.

Eventhrough, both hospitals can achieved the time being cost recovery in the year ahead, at least 4 or 5 years. But the efficacy of the MRI procedure may reduce the cost of operation.

Based on the patient demographic results, we found inequity in asses to care. First, on the residence of patient, there are many patients from outside come to use MRI in Bangkok.

Second, on the payment mechanism as we found from the analysis, the most of MRI' patient covered by insurance scheme except the poor people. This may indicate that the proportion of assessing the MRI is unmet need.

6.2 Policy implication

6.2.1 Specification of MRI

This study, we found the price of MRI is quite difference between high MFS and low MFS. While lowest magnetic field (0.2 tesla) is 25 million Baht, the highest MFS is 75- 80 million Baht which are imported from USA., European and Japan products. Specification is needed for purchasing if lower investment will return on investment is shorter and also can reduce treatment charge below than now (12,000 Baht per case).

6.2.2 Clinical effectiveness studies

Aimed to economic appraisal, such a clinical outcome measure, and satisfaction of patient by randomized control trial. For example 100% of case detected is true-positive. Unfortunately, we didn't study waiting lists. That is an important index of identified need.

6.2.3 Optimal diffusion by region of Thailand .

Based on population need or certificate of need in order to unmet health need because of Bangkok has an over supply will generate an induced demand. However, we found that the most patients come from other provinces. It means that Thailand still not suitable allocated resources like MRI.

However, Thailand has more MRI installed per capita than some developed countries such as UK. and The Netherlands. Therefore, there must be no more MRI in Bangkok area.

6.2.4 Public and Private collaboration.

Public and private mix is a good alternative. Due to Outside Bangkok hospitals don't have neurologists in their area so the most of the patient are referred from another provinces.

Therefore, in case of public hospital or a private hospital in which the MRI Technology was a less productivity, the government could help the utilization pattern of MRI technology in its diffusion for the co-operate of services between public and private sector.

6.2.5 How to appreciate use the exist MRI as an efficiently.

A) Short term approach :

1. Government should be subsidize the low income patients in terms of payment mechanism of the poor to access equal MRI service when they have equal needs.

2. Government should be knowledge about medical technologies to people or setting the patient organization

3. There is urgent need to improve the efficiency and productivity among the exist MRI installed. In the other way, sold out the MRI to less developing countries like, Lao PDR, Burmar

B) Long term approach

1. Professional institution or government who would like to adopt MRI technology should consider the long time maintenance costs in relation with the safety measures of the physical impacts of using bigger Tesla magnetic forces.

2. A consideration of clinical outcome in using MRI technology as a part of the diagnostic procedure should be taken account. It also need an epidemiology study (advert health effect).

3. A lack of regulation in which the MRI technology will be applied, i.e., a national or country registry of the devices. Another area of concern is the scarcity of preventive maintenance on this technology is still lacking in Thailand.