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# Growth of ambulatory surgery and anaesthesia in Thailand

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**Abstract**

Growth of ambulatory surgery and anaesthesia in Thailand has been much slower than in the United States due to non-encouraging government funding, the health care reimbursement system, and cultural factors. In contrast to the situation in most other countries, the growth that has taken place is the result of an inadequate number of beds in public hospitals and not of economic pressures from the health administrator. On the contrary, surgery with overnight hospitalization has steadily increased in private hospitals. However, with the financial crisis in Thailand and South-East Asia, ambulatory anaesthesia will eventually be promoted by both the government and insurance companies. © 1998 Elsevier Science B.V. All rights reserved.

*Keywords:* Ambulatory surgery; Ambulatory anaesthesia; Thailand

## 1. Introduction

Although ambulatory surgery and anaesthesia have grown very rapidly in North America, the United Kingdom and Australia, their growth in other parts of the world have been much slower [1] and vary from country to country depending on government funding policy, health care reimbursement system, economical conditions, culture, life style and the level of ancillary home health care services. Sharing clinical experiences from various countries should help improve the understanding and promote the growth of this challenging field.

## 2. Historical background

The first hospital in Thailand was founded in 1888 when King Chulalongkorn founded Siriraj Hospital, providing herbal and traditional oriental medicine to his subjects [2]. Western medicine was not established until 1923 when Prince Mahidol co-operated with the Rockefeller Foundation to innovate medical teaching and practice in Thailand. Surgery in the 1950s and 1960s was done on hospitalised patients who were very sick and after failure of all other available alternatives, which resulted in a high mortality and complication rate. There was almost no ambulatory surgery except incision and drainage of abscess, close reduction of fracture, excision of a cyst or superficial tumor.

The 3-year training programs in 25 medical specialities including anaesthesia, surgery, orthopedics, obstetrics and gynecology, otolaryngology and opthalmology were started in 1969 and have played an important role in the growth of these fields. Elective surgery gained acceptance from patients and increased in number. More complicated and extensive surgeries were performed, with patients occupying the limited beds for longer periods, leaving fewer beds for simpler surgeries. In the 1980s, the government built more hospitals to serve most small communities and improve facilities in city and provincial hospitals. However, the increased facilities and beds were still not sufficient to cope with the increasing demand of health care and surgery. Major elective operations and cosmetic surgery had to wait until the more essential procedures were

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done. Minor cases were performed under local infiltration of local anaesthetics by surgeons on a same day discharge basis. The common procedures were circumcision, tubal sterilisation, closed reduction of fracture, eyelid surgery, excision of cyst, breast mass excision and thyroid nodule excision. Many paediatric procedures, e.g. circumcision, herniotomy, hydrocelectomy and endoscopy were done under general anaesthesia on an ambulatory basis [3].

With economic growth in the 1980s and 1990s, people were able to afford health care and surgery in private hospitals, at a cost several times greater than in public hospitals. The first for-profit private hospital was opened in Bangkok in 1972 and received a warm welcome. The number of beds in private hospitals increased rapidly to 11983 in 1978 and 28638 in 1995 [4]. Medicine has become a highly competitive health care industry. Private hospitals offer fast and convenient services and treat patients as the center of attention. They seem to provide a much better service and equally good quality of care in non-complicated surgery, but in major, complicated cases they still usually rely on government and university consultant surgeons. Many surgical procedures that are usually performed under local anaesthesia in government hospitals are done under general anaesthesia in private hospitals.

## 3. Outline of the problem

An anaesthesia manpower shortage has always been a problem for Thailand. With 500 M.D. anaesthesiologists for a population of 60 million, Thailand has had to rely on anaesthetic nurses to work in rural areas. They administer general anaesthesia and the surgeons decide whether the patients should be discharged or admitted after the operation. Some patients have to travel far from home to the hospital and surgeons usually prefer to have these patients stay in the hospital for observation and postoperative wound care. This system also works well for patients who feel more secure when they are in hospital.

In government hospitals less than 20% of all elective surgical procedures requiring anaesthesia in adults are performed on an ambulatory basis [5]. In contrast to the situation in other countries where the growth of ambulatory anaesthesia is the result of economic pressure from health administrators, the growth of ambulatory surgery and anaesthesia in Thailand is promoted because of an inadequate number of hospital beds and long waiting lists for many minor surgical procedures. Hospital beds are occupied by patients who need pre- and post-operative care, i.e. fluid and electrolyte replacement, intravenous antibiotics and wound care, oxygen and respiratory support, etc. Paediatric patients are the exception, as most surgeries in children are done under general anaesthesia and about 60% of them are sent home with their parents after they fully recover from anaesthesia.

The growth of ambulatory surgery and anaesthesia in Thailand has been slow for several reasons.

(1) There is no economic incentive from the government or elsewhere to hospitals and health care providers to reduce cost by decreasing the length of the patient's hospital stay or by increasing patient turn-over.

(2) The present health care reimbursment system discourages ambulatory surgery. To avoid trivial and frequent claims of treatment costs at clinics, most insurance companies only reimburse if the patient is admitted into the hospital. The patient is usually responsible for a co-payment for an ambulatory service but not for inpatient service. Patients are then happy to be admitted to hospitals after minor surgery even though the cost of care increases, because the expense can be reimbursed. Private hospitals usually have available beds to accommodate these patients.

(3) Culture plays a role in the slow growth of ambulatory surgery, as in the utilisation of any other services. Having surgery is a major concern to Thai patients and their families. Taking care of a painful, nauseated or drowsy post-operative patient is a frightening and burdensome experience. Thai people are not keen on self help after surgery and feel dependent on their doctors and nurses. They usually expect post-operative admission, if possible. Home health care facility is very limited. Traveling is difficult in the rural area and even in Bangkok. Surgeons prefer to have their patients observed overnight in the hospital and discharged the next morning rather than taking additional responsibility and any medicolegal risk associated with caring for post-surgical patients outside the hospital environment. Thus, there has been a steady increase in the percentage of cases performed on an overnight hospitalisation basis in Thailand, mostly in private hospitals.

(4) The high costs of short-acting new anaesthetic drugs (e.g. propofol, desflurane, mivacurium and alfentanil) have limited their more widespread use. Propofol and desflurane cost 10–15 times more than thiopental and halothane for the same dosage used. Low cost of nursing care because of the low salary in Thailand has reduced the potential saving associated with the use of these imported drugs. Recovery room cost is only a trivial part of the patient's bill. Propofol was compared unfavourably to ketamine for ambulatory cystoscopy in a randomised cost-benefit trial [6]. The faster recovery and shorter recovery room stay saved less than the difference between the two drugs.

## 4. Conclusion

In conclusion, ambulatory surgery and anaesthesia in Thailand is expanding, but at a much slower rate than in the United States. In contrast to the situation in most other countries, there is not much financial pressure from the health administrators or the health care payers to promote the growth of ambulatory surgery. Surgery with overnight hospitalisation has been steadily increasing in private hospitals which have expanded so much in the last decade that there are sufficient beds available to accommodate the patient load. The number of ambulatory surgical procedures with same-day discharge will increase in government hospitals in which beds are usually fully occupied or even over-occupied by patients who need major surgery and extensive preoperative and postoperative hospital care. However, with the financial crisis in Thailand and South-East Asia starting in 1997, the cost-containment pressure from the government and the insurance companies will eventually necessitate a change in this practice, as has occurred in the US and Europe.

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