Will increasing levels of trade in health services thwart the delivery of health equity in Thailand[1]

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Abstract

The Universal Health Care Policy (UC) was introduced in Thailand in 2001 to address equity concerns by ensuring universal access to quality, affordable health care. In recent years trade in health services has been promoted by the general agreement on trade in service (GATS), bi-lateral and regional trade agreements and government policies. The Thai government has promoted health services trade through *Thailand: Centre for excellent health care of Asia.*

This paper explores the compatibility of these two government policies: universal access to health care and promotion of health services trade. The paper will consider the mode-wise characterisation of trade in health services defined in GATS: cross-border delivery of health services via physical and electronic means; and cross border movement of consumers, professionals, and capital.

The impact of trade in health services is shaped by the underlying structural conditions and existing regulatory, policy and the health service delivery framework. An examination of potential positive and negative implications of trade in health services for equity, efficiency, quality and access to health care indicates that health services trade has brought mixed benefits and that there is a clear role for policy measures to mitigate the adverse consequences and facilitate the gains. Some policy measures and priority areas for action are outlined, including steps to address 'brain drain', increasing investment in the health sector and prioritising this investment to address socio-economic and spatial disparities in equity outcomes.

Keywords: trade in health services, health insurance, brain drain, health care equity, universal access.

1. Introduction

Developments in telecommunications, information technology and transport have facilitated rapid globalisation of production and the possibility for globalisation of services. Over the past few decades globalisation has opened up new profit making opportunities throughout the world as companies have relocated to geographical areas that provide comparative advantages in relation to raw materials or reduced production costs as a consequence of low labour costs or institutional advantages including free trade zones and reductions in taxes and charges. As opportunities for expansion in production of goods have declined there has been an expansion in attempts to internationalise trade in services including those that have been traditionally provided by governments such as education and health.

The 1994 GATS Uruguay round covers trade in services as diverse as business, communication, construction, distribution, educational, environmental, financial, health-related and social, tourism and travel recreational, cultural and sporting, and transport services. The objective of GATS is to "establish a legally binding set of commitments to enhancing predictability and transparency under the tenet of progressive liberalization" (Delimatsis, 2007: 28).

Services are classified under four modes of delivery:

- Mode 1: 'Cross-border supply' when services are supplied from one country to another, such as telemedicine;
- Mode 2: 'Consumption abroad' which occurs when consumers purchase or make use of services in another country, such as travelling abroad for medical treatment;
- Mode 3: 'Commercial presence' where a company sets up subsidiaries or branches in another country, such as FDI in private hospitals; and
- Mode 4: 'Temporary movement of natural persons' such as individuals travelling to another country to supply services eg allowing foreign doctors to enter Thailand or Thai doctors going to another country to provide medical treatment.

At the same time that GATS has attempted to liberalise international trade in services to open new markets to profit making opportunities for private firms, there has been recognition of inadequacies in the health system in Thailand that culminated in the introduction of the Universal Health Care Coverage Policy (UC) in 2001.

The purpose of this paper is to examine these developments in order to determine the potential or actual impact of trade liberalisation on equity of access to health services and delivery of high quality universal health care for the Thai people. Section two traces developments on the

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Thai health system, concentrating on the development of universal health insurance coverage from 2001 and the rationale for its introduction.

Section three outlines developments in the trade in health services in Thailand in recent years. The following section considers the potential benefits and risks associated with trade in health services, particularly in relation to equity of access to health services for the domestic population. Section 5 examines equity outcomes in the Thai health system in recent years, paying particular attention to variations in access based on socioeconomic status and geographic location. Possible policy responses to address equity issues and ameliorate adverse consequences of increasing trade in health services are presented in Section 6. Concluding remarks follow,

2. The health system in Thailand

According to the Ministry of Foreign Affairs (2008) the strategic goals of the Thai health systems have been identified as:

- Strengthening the health care system to ensure equal access to quality services for all;
- Increasing capacities such as human, physical and technological resources to enhance the quality of services and distribution across all regions; and
- Recognising health risk factors and incorporating risk-reduction interventions into long-term plans for healthcare provision and delivery of medical services.

Total health expenditure in Thailand in 2005 was 3.5 per cent of GDP, of which 2.24 per cent of GDP constituted public health expenditure (WB, 2007). The Thai health budget increased from 5,571.8 million Baht or 4 per cent of the national budget in 1981 to 77,720.7 million Baht or 8.1 per cent of the national budget in 2004 (Wibulpolprasert, 2005).

There has been a long history of inequity in access to and the cost of health care and a large proportion of the Thai population remained without health cover throughout the twentieth century. In the late 1990s around 44 per cent of the population were estimated to have no health insurance and only mound 21 per cent were covered by the low income health card (Pannarunothai and Mills, 1997). This section traces recent developments in health policy and the introduction of universal health cover in 2001.

There have been various health insurance schemes in Thailand that have provided cover for different sections of the population. Social Welfare provided free health coverage for low income families from 1975 and was extended to include the elderly and children under 12 in 1994. For the near poor the voluntary health card scheme (VHC) was introduced in 1983, providing access to subsidised care for a cast of 500 Baht per annum. From 1980 the Civil Servants Medical Benefit Scheme (CSMBS) provided medical coverage for permanent government officials and their families.

In 1991 the compulsory Social Security Health Insurance scheme was introduced for workers in the private sector. Equal contributions of 1.5 per cent of monthly wages were made by workers, employers and the government. Under the scheme individuals register with a hospital or hospital network that becomes their primary care provider and the hospital receives an annual capitation fee to provide medical treatment.

In 2001 the Universal Health Cart Coverage Policy (UC) known as the 30 Baht policy commenced and provided health insurance for 18.5 million people who were previously uninsured (Towse, Mills and Tangcharoensathien, 2004). UC is funded by general revenue and includes coverage for inpatient and outpatient treatment at primary care facilities and referral to secondary or tertiary facilities as required; dental care; health promotion; disease prevention services; and drug prescriptions. Out of pocket payments are restricted to a flat fee of 30 Baht per visit with exemptions for those on low incomes. (Ministry of Foreign Affairs, 2008). The approach of UC is to provide primary care on a geographical basis funded by population-based capitation fees. The province contracts primary care which is delivered at health centres of hospitals. Reimbursement for patients referred to other hospitals is paid for by the province based on diagnosis related group.

The Social Security Scheme and the Civil Servant Medical Benefits Scheme (CSMBS) were retained and the three schemes vary in regard to the eligible population, the services included, financing and payments (Ministry of Foreign Affairs, 2008). In 2004 UC covered 75 2 per cent of the population while the Social Security Scheme (SSS) covered 13.2 per cent and Civil Servant Medical Benefits Scheme (CSMBS) covered 10.8 per cent.

The CSMBS is funded from general revenue on a fee for service basis. Both Universal Coverage and the Social Security *Scheme* use a capitation rate system Despite significant expansion in health insurance coverage there are areas of concern regarding equity and long-term viability. There are some notable differences between coverage of UC and the other health insurance schemes, For example, dialysis and kidney replacement is excluded from UC due to cost considerations but is available to members of other schemes (Bureau of Policy and Strategy Ministry of Public Health, 2007).

The demand for health services has increased in recent years as a consequence of improved economic conditions and UC. The ability to achieve the UC objective of providing care close to where patients reside is dependent on the system's ability to ensure adequate levels of physical and human resources are available throughout the country. However, there is a long history of spatial disparities in the supply of medical facilities and health professionals. There is evidence of improved accessibility since the introduction of UC since the public share of health expenditure increased from 56.4 per cent of total health expenditure in 2001 *to* 63.9 per *cent* by *2005* (WB, 2007).

3. Thailand's trade in health services

GATS commitments in relation to trade in health services have included: 62 countries have made commitments in relation to medical and dental services; *52* far hospital services; and 34 in respect of nurses, midwives physiotherapists and para-medical personnel (Smith, Blouin and Drager, 2006b). While Thailand has not made GATS commitments for health services, the country has entered into a number of bilateral Free Trade Agreements (FTAs) including with Australia (2005), New Zealand (2005), Japan (2007), China (early harvest 2003), and India (early harvest 2004). Negotiations have also been conducted with the US and Bahrain (Department of Trade Negotiations, 2008). As a member of ASEAN Thailand is also a party to negotiations with China, Korea, Japan and India. Thailand is also negotiating FTAs with economic groupings such as EFTA (Switzerland, Ireland, Norway and Liechtenstein) and BIMSTEC (India, Sri Lanka, Bangladesh, Bhutan, Myanmar, Nepal).

This section examines developments in health services trade in Thailand under the four modes of trade identified by GATS. In general there have been few developments in relation to services supplied from one country to another (Mode 1), or preference for natural persons (Mode 4). There have been some developments in outward FDI but little inward FDI (Mode 3). The major development has been in Mode *2*. The government has promoted Thailand as a regional hub to attract consumers from the developed world and wealthy people from developing countries to obtain medical treatment in Thailand.

Mode 1: Services supplied from one country to another

Health related services that may be supplied *across* national borders include e-education, computing and claims processing, medical transcription and telemedicine. Under GATS e-education is classified as education services and computing and claims processing is classified as computing services.

Wibulpolprasert (2005) reported that revenue from e-health services to India increased from US$264 million in *2000* to US$4,072 million in 2005. Employment in services such as customer interaction centres, medical transcription, financial and accounting services, pre-press and digital pre-media and geographic information systems grew from around 30,000 to 242,000 during this period.

Mode *2:* Consumers or firms making use *of* a service in another *country*

There is a long history of cross border trade in health services. Historically patients travelled to developed countries such as the US to obtain revolutionary or cutting edge treatments that were not available in their own country. More recently the flow of patients has been in the opposite direction as citizens of advanced countries travel to elite facilities in developing or less developed countries to obtain high quality medical treatment at a fraction of the cost of obtaining such treatment at home or to avoid long waiting lists.

Developing countries may have a revealed comparative advantage in provision of health *services* due to lower cost structures, high quality medical facilities with internationally trained staff, the ability to combine medical treatment with tourism and unique services such as traditional medicine (Mashayekhi, Julsaint and Tuerk, 2006).

Thailand bas been actively promoting trade in health services since the decline in use *of* private health treatments by the domestic population

following the financial crisis in 1997. The Private Hospital Association consisting of 185 hospitals works in close collaboration with the Department of Export Promotion on the Long-stay and Healthcare Project (Board of Investment of Thailand, 2003).

Thailand is that largest exporter of health services in the region and offers a wide range of services including heart surgery, cosmetic surgery, laser eye surgery and complex dental treatment. Many of these services are marketed as 'health tourism' opportunities whereby medical treatment may be combined with a holiday for less than the cost of medical treatment in the home country. The number of foreign patients increased from *500,000* in 2001 to 1.37 million in 2007. In *2007* the countries of origin of the greatest number of patients were Japan (17 per cent), the United States (10 per cent) and the United Kingdom (8 per cent) (Thaiways, 2008).

The government plan *to* make Thailand a regional hub for trade in health services in the period 2004-2009, *Thailand.. Centre for excellent health care of Asia*, set an ambitious target *of* treating 2 million foreign patients annually by 2010. Government support for promotion of health service exports has included *a* government administered accreditation *system* for hospitals (HA) to assure potential patients that high quality treatment will be provided (Arunanondchai and Fink, 2006) and will provide accreditation for *spas* in conjunction with the Spa Association (Blouin, 2006). Private hospitals have also sought to gain international accreditation such as Joint Commission International (JCI) accreditation and ISO 9001:2000 by the International Standard Organization.

In addition, the Board of Investment offers incentives to both domestic and foreign investors in private hospitals in the form of tax incentives and Thai health facilities are heavily promoted abroad (Wibulpolprasert and Pachanee, 2008).

A potential inhibitor of Thailand's policy of promoting consumption of health services by foreigners is that many health insurance systems limit benefits to services provided in the home country by recognised providers. Thus, to the extent that potential foreign patients are unable to recoup some or all *of* the cost of services provided *in* Thailand they may be deterred from undergoing treatment.

However, the range *of* services covered by health systems is limited Mast countries do not cover treatments such as dental *or* cosmetic surgery so there is no inhibition of trade for these services. Moreover, in countries such as the United States the high cost of health care has resulted in the promotion of less expensive health insurance for those prepared to have treatment provided offshore. For countries with national health systems that involve rationing of treatment that results in long waiting times, patients may prefer to travel to Thailand for treatment rather than experience reduced quality of life while waiting for treatment in their home country.

Private hospitals have engaged in a number of strategies to encourage foreign patients. Hospitals have established excellence in specialist areas; invested in the latest medical technology; attempted to overcome language barriers by employing bi-lingual or multi-lingual staff; provided serviced apartments for relatives; offered health tourism packages to ease the burden far foreigners to plan their trip and medical treatment; and established offices abroad to promote health services; (Wibulpolprasert, 2005). Bumrungrad International hospital treated 430,000 foreign patients in 2007 and the company is undertaking expansion over the next 4-6 years to increase capacity from 3500 to 6000 patients per day (Bumrungrad Hospital Public Company Limited, 2007). Thonburi Hospital announced in *2007* that it would invest *900* million Baht in new infrastructure and facilities over 2 years *to* attract more medical tourists. In 2003 Thailand had 450 private hospitals with doctors who were trained internationally.

Mode *3:* Commercial presence

Commercial presence includes both inward and outward FDI in health services. In regards to inward FDI Wibulpolprasert (2005) points out that liberalisation policies will allow foreign ownership to increase from a maximum of 49 per cent in 2006 to 70 per cent by 2012. The Board of Investment has identified foreign investment in hospital services as an activity eligible for promotion an condition that hospitals provide at least *50* beds and meet standards set by the Ministry of Health (Board of Investment, 2007). Although FDI by major corporations has been cited as one of the major motivations for GATS, Thailand has very little FDI in health services at present FDI accounts for only around 3 per cent of total investment in private hospitals (Arunanondchai and Fink, *2006).*

Outward foreign investment in health services is a recent development. Bumrungrad Hospital has 80 hospitals and clinics in 7 countries

outside Thailand. These include Asian Hospital in the Philippines and Bumrungrad Hospital which will open in Dubai by 2009. In 2007 the company acquired Asia Renal Care that has dialysis centres in Taiwan, Korea, Singapore, Malaysia, the Philippines and Japan and expects to increase the number of clinics over the next three years (Bumrungrad Hospital Public Company Limited, 2007). Bumrungrad Hospital has had contracts to manage hospitals in Bangladesh and Burma since 2003 and the United Arab Emirates since 2007. Bumrungrad plans to expand Asian Hospital in the Philippines from 250 to 350 beds by 2010 (Bumrungrad Hospital Public Company Limited, 2007). Bangkok hospital has established 12 hospitals in Southeast and South Asia (Wibulpolprasert, 2005; Arunanondchai and Fink, 2006).

Mode 4: Preference of natural persons

Preference for natural persons refers to individuals travelling to another country to supply services. Benefits from this type of trade in services accrue mainly in the form of remittances home from the individuals concerned. External brain drain resulted in the lass of around 25 per cent of medical professionals in the 1960 and 1970s (Wibulpolprasert, 2005). Currently there is little evidence of external brain drain but substantial internal brain drain whereby health professionals are attracted to private hospitals in major urban centres causing substantial problems in maintaining adequate staffing levels in public hospitals, particularly in rural areas.

Government policy has impacted on the extent to which foreign medical professionals are able to practice in Thailand. The 1986 requirement for doctors to pass an examination in the Thai language in order to obtain a licence: to practice has reduced the number of foreign doctors entering Thailand.

4. Benefits and risks associated with trade in health services

This section provides an overview of the potential benefits and risks that accompany trade in health services. The major reason for promoting trade in health services is due to its economic contribution. Provision of services to foreign patients, either in the form of telemedicine or treatment within the country, increases earnings of local residents. Expansion of health micas provides employment opportunities to health professionals and a range of other workers including builders, cleaners and kitchen staff. Foreign direct investment has similar positive income impacts. Inward FDI generates income for local residents who are employed in service provision with flow an effects to the rest of the economy. Outward FDI produces income for local owners through profits. The migration of nationals to work abroad usually generates economic benefits through remittances to family members who remain behind. Wider benefits accrue to society since additional: revenues received by the government may be devoted to enhancing health services.

Trade in health services may inhibit brain drain in countries with a history of exodus of health professionals to other countries offering superior pay and working conditions. Provision of additional opportunities at home including higher pay and greater opportunities for professional development may prevent health professionals travelling to other countries to work.

An additional benefit is the potential to increase the range of services that can be provided within the country due to the upgrading of physical resources and the skills of staff. For example, centres of excellence can develop expertise that was previously not available and new procedures may become more widely available. Telemedicine services that are provided to foreigners require a sophisticated delivery infrastructure that can be extended to residents in remote areas so that highly trained specialists can be consulted for diagnosis and treatment options.

Countries that are struggling to provide medical care for the entire population may realise additional resources for treatment of the poor as a by-product of trade. The development of private hospitals attaining high international service standard provides an attractive alternative to the public system for high and middle income residents. If these sections of the population opt out of the public system in favour of receiving treatment from private hospitals the public resources that would otherwise be devoted to their care can be redirected to improve services to the poor and rural residents (Smith, Blouin and Drager, 2006a).

However, potential benefits from trade in health services are accompanied by significant risks. In the first instance the additional income generated may be unevenly distributed and benefit only a small proportion of the population. To the extent that additional income does pot flow into the

public domain it may provide no benefits to the majority of the population. While external brain drain may be curtailed it could simply be replaced by internal brain drain, whereby health professionals transfer from the public sector to the more lucrative private sector. In this case there are adverse implications for the public health system since professionals trained at public expense are lost to the public system, reducing the capacity to provide comprehensive health care for the entire population. Under circumstances where demand exceeds supply those areas of the health system that are least desirable m terms of remuneration, career opportunities and status are likely to be under-resourced so that socioeconomic and spatial disparities are exacerbated

The situation where wealthier individuals transfer from the public to the private health system may have adverse equity effects by entrenching a two-tier system. The minority may receive expert attention while the remainder of the population are relegated to an under-resourced public system. A danger with this public/private dichotomy is that the exodus of the richer, more articulate sections of the population weakens the political coalitions that *protect* public services from retrenchment (Smith, Blouin and Drager, 2006a). *The* result may be a residualised service for the poor that offers poor services in *terms* of access and quality. In particular there is a danger that the expansion in the private sector will attract health professionals so that the resources available in the public system shrink, reducing doctor to population ratios and causing services to deteriorate. In addition, competition for staff may result in higher wages and escalating costs for the public health *system.* Likewise, increases in the range of services available as a consequence *of* expansion of trade in health services may have adverse equity effects if these services are restricted *to* foreign patients or wealthy nationals.

Additional concerns exist with higher levels of inward FDI. Public funds may be diverted to the private sector if public funds are used to attract investment through inducements such as tax breaks or reduced costs.

In short, there are several pathways for benefits to the local *economy* and population due to expansion of trade in health services but these benefits may not be realised by the majority of the population *so* that equity outcomes may deteriorate.

5. Equity outcomes

Implementation of the Universal Health Care Coverage Policy coincided with promotion and expansion of trade in health services. It is not possible to predict *a priori* how health services trade has affected the equity outcomes of the public health system. This section will, examine information on the Thai health system to attempt to ascertain the extent to which health equity exists and possible *effects* an equity as a result of increased trade in health services.

There is a long history of health inequality and inequity in the health system due to greater use by middle and high income earners (Towse, Mills and Tangcharoensathien, 2004; Bureau of Policy and Strategy Ministry of Public Health, 2007). Health status is determined by income inequality, poverty and access to employment in addition to access to health services (Coburn, 2004). Yiengprugsawan *et al.* (2007) studied self-assessed health and self-reported morbidity using data from the Health and Welfare Survey 2003 and found that poorer health was associated with age, gender and lower socioeconomic status reflected in poor educational achievement or being in the bottom income quintile.

In addition, there are spatial disparities in health status. Residing in rural areas in the North *or* Northeast contributed 40 per cent of the variation in reporting recent chronic illness (Yiengprugsawan *at al.*, 2007). In 2004, 2.5 per cent of children under the *age* of 6 years were classified as having a rather low or a nutritional status lower than the standard. The rates varied from 1.4 per cent in Central region to over 3 per cent in Northeast, which was double the Central rate. Similarly, in 2004 there were 2.4 times as many malnourished children under the age of 5 residing in the Northeast compared to those living in Bangkok.

Health equity is defined as equal access for equal need regardless of socio-economic, ethnic, religious background or region of residence, The remainder of this section will examine socioeconomic and spatial disparities in access to health care.

Socioeconomic variations in health care utilisation

The illness rate reported in the Health and Welfare Survey 2004 for the lowest income quintile was 26 per cent compared to 15 per cent for the highest quintile (Bureau of Policy and Strategy Ministry of Public Health, 2007). Utilisation of various health services has varied by socioeconomic

group. For outpatient care the lowest income quintile were overrepresented at health centres (37 per cent) and community hospitals (35 per cent) but underrepresented at tertiary care hospitals (21 per cent) and private hospitals (17 per cent). In contrast the highest income quintile preferred to seek treatment from tertiary care hospitals (22 per cent) or private hospitals (25 per cent) rather than health centres (4 per cent) or community hospitals (7 per cent).

For inpatient care the lowest quintile was overrepresented in community hospitals (35 per cent) but underrepresented at both tertiary (22 per cent) and private hospital (13 per cent) (Bureau of Policy and Strategy Ministry of Public Health, 2007). In contrast, the top income quintile comprised only 7 per cent of patients at community hospitals but 36 per cent in private hospitals. In terms of the benefits received from the health budget it was estimated that the lowest income quintile received higher subsidies at health centres and community hospitals and similar subsidies for tertiary hospitals. However, higher income groups received greater subsidies than the poor at private hospitals.

Pannarunothai and Mills (1997: 1787) examined health status and utilisation in Phitsanulok and found that "[t]he lowest income quintile was in fact more likely to seek treatment, though from drug stores, private clinics and public services rather than from private hospitals",

To the extent that there are differences in the quality of care available at the various health units it is possible that there are systematic differences in the quality of care received by difference socioeconomic groups and therefore equity implications. For example if the quality of care is superior in tertiary and private hospitals the top socioeconomic groups would receive better quality medical care since they are over-represented as users of these types of care. This is a topic for further research.

Variations in health care utilisation by insurance status

The Health and Welfare Surveys demonstrate that membership of health insurance funds is correlated with socioeconomic status. In 2004, the lowest income quintile comprised 30 per cent of gold card holders who were exempt from the 30 baht payment; 19 per cent of other gold card holders; 9 per cent of CSMBS members and only 1 per cent of SSS members (Bureau of Policy and Strategy Ministry of Public Health, 2007). In contrast over 50 per cent of CSMBS and SSS members belonged to the top income quintile compared to only 8 per cent for gold card (exempt) and 15 per cent far other gold card holders.

Utilisation of health services varied according to health insurance membership. Those covered by UC, CSMBS and the uninsured had in excess of 4 episodes of ambulatory care per annum compared to less than three visits by SSS members. However, per capita admission rates were higher for CSMBS members (0.102 per annum) than UC members (0.086) and SSS members (0.064).

There are indications of differential access to care on the basis of insurance type for various treatments. The two major treatments for patients with ischemic heart disease are coronary by-pass graft and coronary artery balloon dilation. Both procedures were wed more extensively for civil servants. Rates of receiving coronary bypass were 0.46 per cent for civil servants, compared to only 0.18 per cent for SSS members and 0.13 per cent for UC. Similarly, for coronary artery balloon dilation the rates are 9.93 per cent for civil servants, 6.45 per cent for SSS members and only 2.90 per cent for UC (Bureau of Policy and Strategy Ministry of Public Health, 2007).

Variations in fatality rates for persons with the same severity of illness following medical treatment provide an indication sf the quality of care received. Case fatality rates adjusted for age show that UC members have the highest case-fatality rate of 2.09per cent compared to the civil servant rate of 1.77 per cent and SSS patients rate of 1.39 per cent (Bureau of Policy and Strategy Ministry of Public Health, 2007). While these rates are influenced by the severity of illness as well as the treatment provided, when considered in conjunction with evidence of differential access to treatment, they suggest that equitable outcomes are not being achieved. Those covered by UC are disproportionately the poorer members of society, have less access to particular medical treatment and have higher fatality rates.

Spatial Disparities in access to health care

The spatial distribution of medical professionals is uneven in Thailand with the greatest concentration in the more affluent areas of Bangkok and Central region and the least number of health professionals in Northeast and South regions-

Table 1 shows the spatial distribution of medical resources expressed in terms of the population per unit of human resources and hospital beds. The table provides a comparison of each region with Bangkok. Spatial disparities decreased over the period 1998 to 2005. This reflects the policy of redistribution of resources away form the urban areas to the rural areas, Bangkok had the lowest population to doctor ratio (the most privileged) but this increased from 760 persons per doctor in 1999 to 867 in 2005. Northeast had the least health professionals, with 8116 persons per in 1999. This improved to one bed per 740 population in 2005 but awess remained at less than half that for Bangkok residents where there was one bed per 223 population,

doctor in 1999, but the situation improved over the period with the number of persons per doctor falling to 7015 by 2005. Similar improvements were achieved fur dentists (from 38487 to 18157) and nurses (1707 to 968). There has only been marginal improvement in the distribution of hospital beds.

Again Northeast is the region with the fewest resources with one hospital bed for every 780 people.

Table 1 Population to medical professionals by region, 1998 to 2005

Region	Year	Doctors		Dentists		Nurses		Hospital beds	
		Pop	Bangkok	Pop	Bangkok	Pop	Bangkok	Pop	Bangkok
Bangkok	1999	760	1.0	2991	1.0	305	1.0	199	1.0
	2001	760	1.0	3190	1.0	287	1.0	205	1.0
	2005	867	1.0	5064	1.0	285	1.0	223	1.0
Central	1999	3653	4.8	17494	5.8	855	2.8	376	1.9
	2001	3375	4.4	16588	5.2	749	2.6	368	1.8
	2005	3124	3.6	15176	3.0	562	2.0	388	1.7
North	1999	4869	6.4	27225	9.1	1022	3.4	478	2.4
	2001	4488	5.9	20993	6.6	856	3.0	474	2.3
	2005	3724	4.3	17897	3.5	621	2.2	498	2.2
South	1999	4888	6.4	25663	8.6	973	3.2	509	2.6
	2001	5127	6.7	19963	6.3	807	2.8	492	2.4
	2005	4306	5.0	16595	3.3	622	2.2	498	2.2
Northeast	1999	8116	10.7	38487	12.9	1707	5.6	780	3.9
	2001	7614	10.0	32499	10.2	1498	5.2	771	3.8
	2005	7015	8.1	18157	3.6	968	3.4	740	3.3
Total	1999	3395	4.5	9436	3.2	905	3.0	456	2.3
	2001	3277	4.3	8624	2.7	796	2.8	451	2.2
	2005	3182	3.7	7340	1.4	613	2.2	468	2.1

Source: (Bureau of Policy and Strategy Ministry of Public Health, 2007)

The major feature of the distribution of health resources throughout Thailand is concentration in Bangkok and more prosperous regions and the dearth of resources and facilities in the poorer regions. For example, in 2001 there were 10 times as many people per doctor in Northeast as in Bangkok and by 2005 there remained 8.1 times as many. Utilisation of services reflects these spatial disparities in service availability suggesting that access is not equitable. In 2005 the rate of utilisation of outpatient services reached 5.1 in Bangkok while it ranged from 2.5 (Central) to 1.4 (Northeast) in the other regions (Bureau of Policy and Strategy Ministry of Public Health, 2007).

Similarly, the rate of admission to hospital was much higher in Bangkok with 21.7 per cent of the population admitted in 2005. Admissions in the other regions ranged from 15.6 per cent in Central to 10.6 per cent in Northeast. Length of hospital stay was also longest in Bangkok at 5.1 days in 2005 compared to only 3.7 days in Northeast.

Health care financing

The equity of the healthcare system is also related to the burden of out of pocket expenses of users as a proportion of income. Between 2000 and 2004, following the introduction of UC, the proportion of household income devoted to healthcare decreased for all households (Bureau of Policy and Strategy Ministry of Public Health, 2007). For decile one (lowest income), health expenditure declined from 4.6 per cent of household income in 2000 to 2.77 per cent in 2002 and 2.23 per cent in 2004. However, lower income groups continued to spend a higher proportion of income on health than higher income groups. Households in the top income decile recorded expenditure of 1.27 per cent of household income in 2000 and 1.07 per cent in 2004

Competition far health resources: Internal brain drain

Section 4 noted that one of the risks with expansion of trade in health services is that it may induce competition for the limited supply of human resources resulting in shortages in the public health system that may impact on efficiency and access to services. The other source of competition emanates from increased demand from citizens for private hospital treatment that has the same effect. In both instances competition far resources is likely to result in shortages of medical professionals and bid up wages causing additional strain on health budgets.In Thailand there has been a history of internal brain drain as the private hospital sector expanded from the 1980s onward. In the early period the demand for these services was from the wealthier sections of the Thai population. The 1997 economic crisis punctuated growth in demand for private hospital services from the local population but demand increased again with when the economy recovered. Between 1996 and 2001 private hospital usage declined from 26.8 to 17.7 per cent but then increased to 22.4 per cent by 2003 (Pachanee and Wibulpolprasert, 2006). Subsequent growth in the number of foreign patients being treated in Thailand has further increased demand for private hospital services. The expectation that 2 million foreigners will be treated annually by 2010 will further accelerate the demand for medical staff.

Table 2 Changes in the number of doctors in the public health system, 1994 to 2006

Year	Graduates	Re-appointed	Total increase	Decrease	Net loss (% of increase)
1994	526		526	42	8.0
1995	576		576	260	45.1
1996	568		568	344	60.6
1997	579	30	609	336	52.8
1998	618	93	711	299	33.3
1999	830	57	887	204	17.7
2000	893	98	991	201	11.5
2001	883	82	952	276	22.0
2002	878	38	916	564	59.9
2003	1013	39	1052	795	74.6
2004	998	32	1030	468	43.7
2005	741	37	778	663	84.5
2006	1188	110	1298	777	56.1

Source: (Bureau of Policy and Strategy Ministry of Public Health, 2007: 273, Table 6.3)

Tabla 2 shows the increase in the number of doctors in Thailand from 1994 to *2006*. New graduates and re-appointed doctors result in an increase in the number of doctors while doctors leaving the system reduce doctor numbers. The number of doctors leaving the system increased in the period up to 1997 as demand in the private sector grew, then flattened until 2001 and then accelerated. The net loss shows the proportion of doctors leaving the system. For *6* of the last 11 *years* (1996 to 2005) the net loss had exceeded 50 per cent.

This trend shows that a large proportion of doctors trained at public expense are attracted to the private hospital system which makes no contribution to the cast of training and is problematic for ensuring that there are sufficient numbers of doctors to provide quality treatment in the public system. Blouin (2006) emphasises the negative effects of increases in the number *of* foreign patients by pointing out that one foreigner may use the resources that would be used by four or five Thais *so* that the impact in five years may be that an additional 5,000 doctors may be required in urban private hospitals. In particular, rural and remote areas are likely to be adversely affected and spatial disparities in equity of access to treatment *are* likely to increase.

6. Policy responses

The evidence presented in the previous section demonstrates that there have been improvements in access to the health system since the introduction of UC and a significant reduction in spatial disparities in access and utilisation. However, the objectives of achieving equal access to quality services for all and increasing resources available in the health system to enhance quality and distribution across regions are far from accomplished. Several concerns have been raised about the future sustainability of UC due to the low capitation fee According to Towse, Mills and Tangcharoensathien (2004), the introduction of capitation fees resulted in many provinces and hospitals having deficit budgets in 2002 and 2003 and they warn that if the capitation rate is not adjusted to reflect costs and usage, the quality of w e and confidence in the scheme could deteriorate. The importance of adequate funding is expressed by the Bureau of Policy and Strategy *(2005:* 42):The Thai government must provide a capitation payment that is high enough to cover most primary care costs, but it also must instill safeguards to prevent any public provider from incurring loses and carrying a large debt burden. With such protections in place, hospitals can be certain that, regardless of their costs, there will be some conditions under which the government will reimburse the costs of providing its services. Increased demand for health services as a consequence of the introduction *of* the Universal Health Care Policy has coincided with increased demand for private hospital services emanating from the increase in foreign patients and the increasing number of residents seeking private treatment. The major impact on the public health system from the expansion in trade in health services is that it exacerbates the long-standing problem of internal brain drain as doctors arc enticed to leave the public system *to* practice in the private system.

Pachanee and Wibulpolprasert (2006) point out that the greatest driver of demand in the private sector is presently from Thai patients. However, the rate of increase of foreign patients is higher than for domestic patients so the increase in trade will make up an increasing proportion of additional demand in the future. The policy challenge *is* to increase the number of medical professionals to meet increasing demand and develop effective strategies to retain staff in *the* public health system and simultaneously improve the spatial distribution af resources to deliver equitable access to health services.

The government has struggled to overcome the problem of doctors leaving the public system aver a long period of time. As the private sector expanded in the 1990s the number of medical students was increased as shown in Table *2* above. Between *2005* and 2014 there will be an increase of 10,678 medical students concentrating on rural recruitment, training and placement (Wibulpolprasert and Pachanee, 2008). Retention strategies have included penalties and inducements which Wibulpolprasert and Pachanee (2008) claim can be incompatible, The requirement of 3 years service in the public system, that commenced in the 1960s, was extended to 12 years in *2005* for the rural recruits and the fine for breaching the service condition increased from US$12,000 to US$60,000 (Wibulpolprasert and Pachanee, *2008).* Financial incentives provided to rural doctors include hardship allowances, overtime payments and other allowances. Other incentives include actress to training and improved working conditions.

However, Wibulpolprasert and Pachanee (2008) contend that the financial incentives partially negate the deterrent effect of the threat of heavy

fines for breaching service requirements. Private hospitals absorb a large number of publicly trained health professionals but make no contribution to the public system. Thus the benefits of additional trade in health services are expropriated by the private sector with the public sector bearing the costs. There are a number of strategies that the government could consider implementing to combat the problem of internal brain drain:

- Require the private sector to contribute to training (Adlung and Carzaniga, 2006);
- Require the private sector to make a contribution to public health by providing free treatment to the poor and/or provide medical services in rural areas (Adlung and Carzaniga, 2096; Pachanee and Wibulpolprasert, 2006);
- Limit tax incentives to those private sector organisations that also provide public health services (Pachanee and Wibulpolprasert, 2006);
- Tax the profits of private health providers and use the revenue for the public health system (Blouin, 2006); or
- Limit expansion of the private sector in the short-term until the additional medical recruits graduate so that supply is guaranteed for the public health sector.

7. Conclusion

This paper has examined the implications of the simultaneous implementation of UC and increased promotion of trade in health services Integral to UC was a strategy to increase equity of access to health care through a redistribution of resources that were previously concentrated in the more affluent urban areas, particularly Bangkok, to rural areas. The promotion of Mode 2 trade in health services has had two major negative equity impacts. In the first instance, expansion of the treatment of foreign patients has further entrenched a two-tier system. High income groups may opt to use the private system to access a range of high quality treatments that are not available to the remainder of the population. This situation could have negative long-term effects on the sustainability of the public health system by eroding wide-ranging support for the system and result in a residualised system for the poor. Secondly, the inequitable distribution of medical professionals is exacerbated by increasing demand for private hospitals in urban areas and the aggressive expansion into the market for trade in health services (Wibulpolprasert and Pachanee, 2008).

In the short-term, the inelasticity of supply of health professionals and the current shortage in many areas in Thailand means that any expansion of Mode 2 treatment of foreign patients will have detrimental effects on equitable access to medical care for the Thai population. Thus, at least in the short-term, an increase in trade in health services threatens the achievement of increased equity that was the motivation for universal health cover. The government therefore is faced with the choice of pursuing trade promotion or health equity; choice of the former will have adverse impacts on provision of public heath services.

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