

## ACCESSIBILITY OF MODERN AND TRADITIONAL HEALTH SERVICES IN SINGAPORE\*

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While accessibility to health services and medical care, defined by the supply of facilities, manpower and cost, has received due attention in Western settings [1], its study has been neglected in Southeast Asia. This paper will describe the accessibility of health services in Singapore.

The criteria for assessing whether a health care system is accessible to all groups in the population have been delineated by J. H. Babson:

A precondition for medical care is that contact be established between people needing health services and the persons providing these services. It must be possible for this contact to be realized at the time and place of need if an optimal level of medical care is to be provided. Essentially, then, the requisites of accessibility are quantitative adequacy, appropriate geographical distribution, and absence of cultural, economic, and educational barriers to medical care. [2]

While Babson's definition of accessibility is comprehensive, others have identified more specific barriers to health care, i.e. direct out-of-the-pocket cost, length of the queue for various kinds of treatments, and general definitions of conditions which qualify the patient for treatment. [3]

A combination of these approaches indicates that the major components of accessibility are: (a) quantitative adequacy; (b) appropriate geographical distribution; (c) the direct cost of health care in terms of time and money; (d) the educational sophistication necessary to utilize the system successfully, and (e) the cultural values and beliefs attached to health and illness. The array of values and beliefs regarding health and illness are relevant here only to the extent that they affect the individual's perception of the accessibility of health services and his decision to utilize such services. Perceived accessibility refers to the individual's interpretation of his chances to obtain a given health care service, i.e. the difficulty or easiness with which he thinks he could enter the health care system.

\* This paper is a revised version of a paper presented at the Workshop on "Access, Development and Distributive Justice" organized jointly by the International Legal Center (New York) and the Institute of Southeast Asian Studies (Singapore). This workshop was held in Singapore from 31 July to 2 August 1976. The definitions of modern and traditional health care systems used in this paper are as follows: the traditional health care system is that provided by folk healers and refers to their services and the distribution practices they use for their medicines and prescriptions. The modern health care system comprises medical doctors, whether general practitioners or specialists, and all other health care personnel, and health care facilities and equipment which work is based on the principles and technology proper of Western medicine.

The use of health care services is not only determined by objective barriers like money and time, but also by these perceptions. Just as the perception of illness is an important determining factor of utilization of health services [4], so is perceived accessibility of health services [5].

I will describe the accessibility of Singapore's health care services, both modern and traditional, in terms of quantitative adequacy, geographical distribution, and the barriers of cost, education and perceived accessibility. The cultural barrier mentioned by Babson [6] is part of the perceived accessibility factor.

### QUANTITATIVE ADEQUACY

The most readily available indicator of health needs of a given population is the infant mortality rate. In addition to being included in international yearbooks and other published records, the infant mortality rate is also considered one of the most sensitive indicators of health care needs because it is closely associated with the socio-economic conditions of the population [7].

To complement the picture given by the infant mortality rate, researchers frequently look also into the supply of manpower (proportion of population per unit of health personnel), supply of facilities (proportion of population per hospital bed), and current use patterns indicated by the proportion of births in hospitals [8]. All these indicators have their own weaknesses [9]. Yet, considering the current lack of more accurate indicators and the relatively low level of medical specialization in the Southeast Asian region, the above four indicators are useful here to compare Singapore's modern health services to other countries in the region.

Table 1 compares infant mortality rate, manpower supply and supply of facilities, for the five country members of the Association of Southeast Asian Nations (ASEAN) [10]. Singapore has the lowest infant mortality rate among the ASEAN countries, and the smallest ratio of population per hospital bed, but it ranks second to the Philippines in supply of physicians and dentists, according to this particular source. However, in a 1975 publication UNESCO indicates that the Philippines have been afflicted by an "exit rate" of physicians of about 40% of those registered during the past 10 years [11]. Because of this high emigration rate, other sources give a ratio of one physician for every 2800 Filipinos in 1970 [12], which is more than twice the figure given in Table 1. In fact, Singapore is regarded as the only country in Asia with a doctor population ratio approaching that recommended by the World Health Organization as

Table 1. Selected indicators of health care needs and supply of health manpower and facilities in the ASEAN countries: 1961 and 1969

ASEAN countries	Midyear population (thousand)		Infant mortality rate per thousand*		Population per physician		Population per dentist		Population per hospital bed	
	1961	1969	1961	1969	1961	1969	1961	1969	1961	1969
Indonesia	95,572	117,608†	81.7	87.2‡	95,191	34,723	516,605	270,986	1240	1429
Malaysia (West)	7137	9019	63.0	43.0	6500	4232	11,530	14,005	339§	317
Philippines	28,210	35,740	72.4	67.3	1607**	1203**	3209**	2987**	1811	914
Singapore	1687	2043	32.1	20.7	2390	1536††	5239	5225	252‡‡	293‡‡
Thailand	27,210	34,037	51.1	26.2	8005	6396	100,778	55,616	2175	1458

\* Number of infant deaths per 1000 live births.

† United Nations estimate.

‡ This figure is for 1965 which is the latest available in United Nations, ECAFE (1972).

§ This figure corresponds to 1962 as the 1961 figure was not published in ECAFE (1972).

|| Year of registration, not of occurrence.

\*\* Based on registered personnel only. The actual figures of those practising in the country may be lower due to emigration (see UNESCO, 1975, p. 41).

†† Derived from Singapore Department of Statistics, 1976, p. 206.

‡‡ Government hospitals only.

Source: Derived from United Nations, ECAFE (1972, pp. 140, 251, 343, 359 and 393, respectively).

adequate, i.e. one physician for every 1000 persons in the population [13].

A closer look at the changes that the Singapore modern health care system has undergone during the past decade is provided in Table 2, which gives the rates of increase in supply of manpower and facilities from 1965 to 1975. The fastest growing sector in the modern health care system has been the nursing sector, with an increase of 105% during the past decade, followed by a 76% increase in the number of physicians during the same period. In contrast to this rapid increase, the number of qualified dentists has increased only 23% in the past 10 years. Although the number of hospital beds has been increasing at a slower pace than that of the population increase (17

and 19.2%, respectively), the situation is expected to improve when the new Singapore General Hospital is completed.

The final indicator is the proportion of births in hospitals, presented in Table 3. The demand for modern health services for childbirth has increased steadily in the past decade. The important fact shown in Table 3 is that modern health care services have been utilized by the great majority of Singaporean parents for childbirth.

#### GEOGRAPHICAL DISTRIBUTION

It is a well known fact that modern health services, particularly specialized ones, are more readily access-

Table 2. Rates of increase in supply of manpower and facilities in Singapore's modern health care system: 1965-1975

Health services	Number		Actual increase	Rate of increase (%)
	1965	1975		
Nurses	2807	5767	2960	105
Physicians	919	1622	703	76
Dentists	342	419	77	23
Hospital beds*	6817	8005	1188	17
Population (thousand) (midyear estim.)	1886.9	2249.9	363	19.2

\* Government hospitals only.

Source: Derived from Singapore Department of Statistics (1976, pp. 206, 208 and 11).

Table 3. Distribution of live-births by attendant at birth, 1964, 1972-74. Singapore (%)

Attendant at birth	1964	1972	1973	1974
Hospital attention	70.7	86.2	88.1	88.1
Private doctor with/without assistance of nurse	4.3	5.2	5.0	6.2
Private midwife	15.4	7.9	6.5	5.3
Government midwife	9.2	0.6	0.3	0.3
Delivery without doctor, nurse or midwife	0.4	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0

Source: Upton D. C., Piah H. S. H. M. and Lim K. L. *Report on the Registration of Births and Deaths and Marriages*, National Printers, Singapore, 1974, p. 9.

ible to urban than to rural populations [14]. Singapore is a highly urbanized nation; only 13% of her total land area is occupied by farms [15]. Thus, an appropriate geographical distribution of health services is easier to attain in Singapore than in any other of the neighbouring countries, each of which has vast rural areas. Everyone in Singapore is, technically, only a telephone call or a short ride away from a modern health care service. Nevertheless, to cope with the present and future demands, Singapore's modern health care system is currently undergoing changes and adaptations pertaining to the geographical distribution of services.

Two illustrations of this process of change are the planning for extension of outpatient services to domiciliary services, and the reorganization of hospital catchment areas. Regarding the former, the Ministry of Health launched the "Home Nursing Foundation" scheme on 3 December 1976. This scheme is aimed at providing home nursing for the aged, the disabled and the chronically-ill as well as home visits to discharged mental patients. Eleven nurses have been assigned so far to the HNF which is operating from seven outpatient clinics [16]. The outpatient services are already organized to be as close as possible to the people. There are 26 Government outpatient clinics distributed throughout the Republic, in addition to two mobile units [17].

The reorganization of hospital catchment areas was set in operation in January, 1975. In conjunction with the construction of the new Singapore General Hospital, the Ministry of Health established four hospital catchment areas or zones, around four hospitals: Alexandra Hospital, Singapore General Hospital (formerly Outram Road General Hospital), Toa Payoh Hospital (formerly Thomson Road General Hospital), and Tan Tock Seng Hospital.

This zoning of catchment areas is expected to increase hospital accessibility, as hospital care is "brought" closer to the people by instructing them to seek care in the hospital assigned to the zone where they reside. It is expected that the demand for hospital care that had been directed primarily to the Singapore General Hospital before the zoning, will be more evenly distributed among the four hospitals. The success of this reorganization depends on actually increasing the utilization of the Alexandra, Toa Payoh and Tan Tock Seng hospitals. The problem of perceived accessibility is worth mentioning here. In a recent study, a random sample of adults, living in 14 different public housing estates scattered around the island, were asked to name the hospital nearest to their homes. Regardless of the actual distance between their homes and the hospitals, 66% of the respondents (the total sample size was 1031) perceived as *nearest* to their homes only two of the four major hospitals: 40% mentioned the Singapore General Hospital; 26% named the Toa Payoh Hospital; 13% mentioned Alexandra Hospital; and only 2% named Tan Tock Seng Hospital [18].

These data were collected in the first half of 1974, one year before the zoning of hospital catchment areas was introduced. Whether or not people's perception of distance changed since then is a matter that deserves investigation. The task of health policy formulators and health policy implementers would

be aided by information on how perceptions of accessibility to health services change.

The information presented in the preceding pages shows that Singapore's modern health care system is probably the best in the Southeast Asian region, in terms of quantitative adequacy and geographical distribution of services.

#### *Traditional health services*

How do the Singapore traditional health services compare to those of other Southeast Asian countries in terms of their quantity and geographical distribution? One of the major difficulties in answering this question is the unfortunate scarcity of systematic records on the traditional health care system. This is a common problem encountered for developing countries [19]. For this reason, the traditional health services cannot be analyzed with the same indicators used for modern health services.

The ratio of population per traditional healer can only be guessed, given the absence of a general register of all traditional healers. However, some information exists on Chinese physicians. There are three major organizations of Chinese physicians in Singapore, i.e. the Chinese Physicians Association (CPA), the Thong Chai Medical Institution (TCMI) and the Chinese Acupuncture and Cauterisation Centre (CACC), each one with its own school of Chinese Medicine and its own outpatient clinics. The CPA alone has 387 members, 120 of whom were on duty at the three branches of the CPA-managed Chung Hwa Free Clinics in 1976 [20]. The CPA is said to represent about 75% of the qualified Chinese physicians in Singapore [21].

Similarly, the only information on facilities in the traditional health care system comes from the Chinese physicians. Two of the three major organizations of Chinese physicians are expanding their services. The TCMI moved into its new premises in May, 1976; the ten-storey building accommodates the outpatient clinic and a library of Chinese medicine [22]. The CPA will also move into new and larger headquarters shortly [23].

The capacity of these Chinese physicians' clinics can be appreciated by the annual volume of patient attendance at the three CPA clinics and the TCMI clinic. The CPA clinics have had an annual average attendance of 135,638 patients during the period 1952-1975 [24]. The records of the TCMI indicate that their annual average attendance from 1949 to 1967 (date of their latest published records) was of 103,895 patients [25].

Compared to the modern health services, the Chinese physicians play an active yet subordinate role in providing health care for the population. This is the impression conveyed by the different rates of patient attendance per thousand population at the 26 Government outpatient clinics and at the three CPA clinics presented in Table 4. The rate of patient attendance at the Government outpatient clinics has increased steadily in the past years and at a faster pace than the patient attendance at the CPA clinics. It must be noted, however, that Table 4 presents a comparison of two numerically different services, i.e. 26 Government outpatient clinics versus three traditional clinics. To obviate this disparity, the three tra-

Table 4. Rates of patient attendance per 1000 Population at selected modern and traditional health services in Singapore, 1969-1973

Health services	1969	1970	1971	1972	1973
<b>MODERN</b>					
Government outpatient clinics	770	887	885	894	942
<b>TRADITIONAL</b>					
CPA clinics	109	108	116	134	123
Population (thousands) (midyear estimates)	2042.5	2074.5	2110.4	2147.4	2185.1

Sources: Derived from Outpatient Services (1973, p. 30) and Chinese Physicians Association (1975, p. 3).

ditional clinics can be seen *vis-à-vis* their respective nearest Government outpatient clinics, in terms of their patient attendance. This comparison is given for 1973 in Table 5. Although there are other traditional and modern health services (e.g. general practitioners' clinics) within the same neighbourhoods, only attendance at the CPA clinics and Government outpatient clinics can be compared here because these two services are the only ones that offer the required records. The 1973 figures are the latest available.

The most interesting information provided in Table 5 is that the importance of traditional health services varies with their geographical location. In the neighbourhood A, for example, there is a clear preference for traditional health services: 67% of the total 1973 patient attendance at both types of clinics was reported by the CPA clinic. On the contrary, most of the total patient attendance in the neighbourhood C (81%) was reported by the modern health service, with only 19% of that attendance corresponding to the traditional health service.

A word of caution must be inserted here. The data in Table 5 do not allow for generalizations on utilization behavior of Singapore's population; rather, they stimulate the formulation of hypotheses for new research on health services utilization and other health-related behavior. One such hypothesis is that the ethnographic characteristics of certain areas of Singapore and the age composition of their residents, might account, to some extent, for the residents' preference for traditional health services over modern health services.

This brings us to the geographical distribution of traditional health services. Here again, more information exists on Chinese physicians than on other traditional healers. The CPA has established its three clinics in densely populated areas. The TCMI also

has its headquarters in the core of the city. This location pattern follows closely the distribution of general practitioners' clinics [26].

As for the non-Chinese traditional healers, some case studies [27] and my own field work indicate that a few Malay healers make home visits to their clients. This system of home visits allows the healer to serve a sparsely distributed clientele. Apparently, though, Indian healers tend to be more home-based i.e. less itinerant, than the Malay healers. This assumption is based on scanty information. Empirical data on the organization and geographical distribution of traditional healers and their services should be collected.

How do the Singapore traditional health services compare to those of other countries in the region? It is difficult to say, given the lack of systematic records on manpower and facilities. Yet, taking into account that modern health services are concentrated in urban areas [28] and that the other four ASEAN countries have vast proportions of their territories as rural land, then it is possible that traditional health care plays a more important role in these countries than in Singapore, by fulfilling the health care needs of sectors of the population that are not reached by modern health care.

#### BARRIERS TO ACCESS

Three barriers to access will be discussed: the economic barrier, the educational barrier, and the perceived accessibility of health services.

##### *The economic barrier*

One of the first concerns when analysing health services in most countries, is whether a person in need of health care can afford it. The economic premises behind health care systems around the world are as

Table 5. Patient attendance at three modern and three traditional clinics in Singapore in 1973

Location	Government outpatient clinics		Chinese Physicians Association clinics		Total attendance at both government outpatient and CPA clinics	Attendance at CPA clinics as per cent of total
	Clinic	Attendance	Clinic	Attendance		
Neighborhood A	Desker Road	52,703	Serangoon Road	108,687	161,390	67
Neighborhood B	Still Road	155,508	Geyland Road	122,880	278,388	44
Neighborhood C	Maxwell Road	155,292	Telok Ayer Rd.	37,466	192,758	19

Sources: Derived from Outpatient Services (1973, pp. 43-44), and Chinese Physicians Association (1975, p. 3).

numerous as there are political systems. One finds, for example, a "free enterprise" policy directing the organization of health care in the United States [29]; two different interpretations of centralized health care, i.e. the British [30] and the Russian [31]; the West German model of cooperative efforts from the public and the private sectors to create a national health care system [32]; the Chinese innovative concept of decentralization of professional resources [33], and many more. Technically, each system tries to alleviate with its own devices and regulations the problem of cost of health care for the consumer. Although the welfare of the consumer might not always be in the list of priorities of the decision-makers, the effectiveness of planning at the national level appears to correspond directly with the degree of authority of the central government [34].

In Singapore, the economic barrier to modern health care has been overcome to a great extent by an active government involvement in the distribution and administration of health services. The government hospitals (which include the largest and best equipped in the country) have been organized so that entrance requirements are reduced to a nominal fee of S\$2.50 (about US\$1.00) per consultation for outpatients; this fee may be waived if the patient cannot afford it. Consultation is free for government employees.

In addition to the fee, the patient is expected to show his identification card and to fill in his medical card on the first visit. These are the only requirements for entrance to the government outpatient services. Government hospitals also have free inpatient care for the poor, and their fees are generally lower than those of private hospitals. The private modern health services offer general practitioners' and specialists' fees ranging from S\$5 to about S\$35 per consultation.

The traditional health care system also offers a wide range of fees, e.g. free consultation at the TCMI; voluntary donations among individual Indian, Malay and some Chinese healers; small fixed fees (S\$0.50) at the CPA clinics; a S\$2 fee per consultation at a CPA member's private clinic or S\$5 if the Chinese

physician has to make a house call; and acupuncture fees of S\$25 per visit at the CACC.

Thus, both the modern and the traditional health care systems offer easy access to the lower income groups, and they have expensive and specialized care for those who can afford it. This is illustrated in Table 6 which shows the influence of family income level on the choice of health services of a random sample of people living in public housing. The distinction between Chinese physicians and the other traditional healers does not appear in Table 6. It was difficult to establish the distinction at the time of data collection. Nevertheless, it is possible to observe that services offered by the traditional health care system were selected by similar proportions of people from different income levels, in response to the question "If you had your choice, would you rather see a bomoh/sinseh (traditional healers), or go to a government clinic, or see a private doctor?"

Three other important features of the preference for health services in Table 6 are: first, regardless of their family income level, most people preferred modern health services; second, the government outpatient clinics with their nominal fees or free services are the most likely choice of lower income groups; third, the higher one's family income, the more one prefers to see private general practitioners rather than traditional healers or government outpatient clinics.

A detailed economic analysis of Singapore's health care system is beyond the scope of this paper, yet modern and traditional health care are organized with the lower income groups in mind. This planning of health services for the poor means that there is no major economic barrier to access to health services in Singapore.

*The educational barrier*

The term educational barrier refers to the information a person has about the health services available to him, and when he should seek health care. Such information is closely related to the person's formal educational level.

The educational barrier to modern health care

Table 6. Choice of health service by family income (%)

Choice of health service	Family income (S\$)				
	Less than S\$200	201-350	351-500	501-800	S\$801 or more
<i>Traditional</i>					
Traditional healers	4.3	3.6	4.7	5.4	4.7
<i>Modern</i>					
Government outpatient clinics	51.1	45.9	35.7	29.3	23.4
General practitioners clinics	34.0	45.6	52.6	61.5	71.0
<i>None</i>					
"Never feel sick"	10.6	4.9	7.0	3.8	0.9
Total (N)	100.0 (141)	100.0 (344)	100.0 (258)	100.0 (130)	100.0 (107)

Chi-square = 54.473; d.f. = 12; P < 0.005;  
Gamma = 0.158; Kendall's Tau = 0.106

Source: Quah (1975, p. 109).

refers to the degree of sophistication necessary to go through this system successfully. The basic assumption is that the lower their educational level, the less likely people are to have information on available health services, to understand them and to use them, and the less able they are to judge accurately the potential danger of symptoms in order to seek health care opportunely. This effect of education is particularly important for preventive health services.

No direct data on the association between educational level and accessibility to health services exist for Singapore. However, information on utilization of health services shows that, compared to less educated people, those with secondary school or higher education are: (a) more aware of the physician's role and their own rights as patients; (b) more likely to emphasize the importance of cleanliness and proper eating habits as factors defining a healthy person; (c) more likely to acknowledge the importance of regular exercise as a practice to stay healthy; (d) more prone to pay attention to health disorders that do not threaten the performance of daily work activities; and (e) more likely to go for regular medical check ups [35].

Another important factor in multilingual societies is the language of education. The key question is: do people educated in schools with different languages as the medium of instruction—Chinese-, Malay-, Tamil-, and English-educated—have similar levels of information on modern health services and the seriousness of symptoms?

In Singapore the middle and upper socio-economic status groups are likely to be English-educated while groups with lower socio-economic status are likely to be Chinese-educated, Tamil-educated or Malay-educated [36]. As socio-economic status is directly correlated with education and income [37], it may be expected that the English-educated have higher education than the other language stream groups and, thus, have more information on health services and the relative danger of symptoms. In short, the English-educated might enjoy greater ease when dealing with the modern health care system. This point has to remain an assumption until more data are collected.

Users of the traditional health care system do not need to have any educational sophistication. On the contrary, folk healers appear to be consulted by similar proportions of people with different levels of education [38]. The language barrier might be that the use of a vernacular language is appropriate and desirable when dealing with traditional healers. But this is not a strict requirement. The traditional health care system is characterized by the flexibility of its entrance requirements, and traditional healers are eager to emphasize the open door policy of their services with regard to any ethnic or linguistic groups [39].

#### *Perceived accessibility*

The final barrier to access to health services is perceived accessibility. Perceived accessibility may or may not coincide with objective accessibility of health services such as actual cost and distance from home. In addition to the perceived distance to hospitals mentioned earlier, a typical illustration of the role of perceived accessibility is the social labelling of disease. While, generally speaking, sick people are not

held responsible for their illnesses, certain diseases are thought to be caused by wrong-doing on the part of the affected person, or they otherwise provoke dislike or avoidance. Such diseases vary in different societies, but common examples are leprosy, venereal diseases and mental illness. People affected by these diseases face "stigmatization, resulting social distance and feeling of humiliation resulting from [the] particular illness definition." [40]

The negative social label given to a disease is, most of the time, internalized by the sick individual himself. Consequently, upon realizing that he has the early symptoms of the disease, his initial reaction is to avoid health care. From this point of view, health services are inaccessible, regardless of their low cost or physical proximity. Unfortunately, this avoidance of health care continues in many cases until the disease is too advanced to be treated successfully.

Another common instance of perceived accessibility as a barrier to access are beliefs about the etiology of disease. A disease that is believed to be caused by spirits, for example, cannot be cured by modern medicine. This is the typical stand of some groups that follow traditional indigenous beliefs and practices [41]. A sick person may perceive modern health care services as inaccessible whenever he thinks his health problem has been caused by spirits.

A person's definition of the important quality of a given health service, delineates his perception of accessibility. The definition may depend on criteria not connected to the actual probabilities of cure offered by the given service. For example, among people who are primarily concerned with getting medicines that are "easy to take" or "not bitter", or medicines that they have heard of, the most popular and accessible services are the ones offered by traditional healers. For people whose major concern is the cost of health care, the government outpatient clinics are the best choice. And private medical practitioners are the most accessible in the eyes of people who deem it very important to have a short waiting time at the clinic, a short distance to travel to and from the health service, and to know the physician personally [42].

Perceived accessibility affects the use of traditional healers. For example, some people who normally consult traditional healers think that consulting a "bomoh" (Malay folk healer who is said to practise magic and incantation [43]) is wrong, and that what is advisable is to consult a religious healer instead (e.g. a "pawang" [44]). In the traditional health care system, perceived accessibility may express the client's faith in a particular healer and no others.

Perceived accessibility, molded by tradition, values, beliefs and even personal character, is manifested in at least four ways: the stigmatization caused by social labelling of diseases; cultural beliefs in the etiology of disease; past experiences with health services personnel; and the person's own criteria of what is important in his selection of health services, i.e. time, cost, good manners of the practitioner or friendly atmosphere, effectiveness of treatment, "sweet" medicines and other considerations.

#### CONCLUSION

Singapore has a dual health care system from which patients can select modern or traditional health

services; of the two systems, the modern health care system predominates in fulfilling the health care needs of the population.

The coexistence of two types of health services occurs in the context of the development that Singapore is undergoing. Singapore's young population tend to accept "change and progress as a highly desirable end" [45]. Thus, the general preference for modern health care may be part of this orientation. Even among traditional healers, the organized Chinese physicians are interested in improving and "modernizing" their services. Yet, the orientation towards change coexists more or less harmoniously with the traditional values and beliefs. This is exemplified by the persistence of traditional health services, the tendency of some people to use both traditional and modern health services, and the expansion of services among Chinese physicians. The tendency to combine traditional and modern health practices has also been detected by Ronald Frankenberg and J. Leeson in their work in Zambia [46] and by almost every observer of health services in Third World countries.

The brief review made here of Singapore's health services indicates that the modern services are within the reach of everyone, and that they are among the best in the Southeast Asian region. Moreover, traditional health services, particularly the Chinese physicians services, are easily accessible to most people in Singapore.

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23. As stated by Mr. E. K. Ngoh during my personal interview with him on April 1976.
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25. See Thong Chai Medical Institution: *Commemorative Publication of the 100th Anniversary*, TCMI, Singapore, 1968, p. 33.
26. Singapore Ministry of Health: *National Survey of Medical Practitioners*, Ministry of Health, Singapore, 1976, p. 15.
27. See for example, Normah M. A. The syncretic basis and functions of spirit beliefs and institutions in a Malay village community, Academic Exercise, Department of Sociology, University of Singapore, 1973; and Raja A. Bomoh practices and bomoh belief systems in Singapore, Department of Sociology, University of Singapore, unpublished paper, 1975.
28. UNESCO, *op. cit.*, p. 35.
29. See Waitzkin H. B. and Waterman B. *The Exploitation of Illness in Capitalist Society*. Bobbs-Merrill, Indianapolis, 1974.
30. Cooper M. H. *Rationing Health Care*. Croom Helm, London, 1975.
31. Babson, *op. cit.*
32. See Altenstetter C. *Health Policy Making and Administration in West Germany and the United States*. Sage Publications, Beverly Hills, 1975.
33. See Kao F. F. and Kao J. J. Traditional and modern medicine in China. *Impact of Science in Society* 25, 259, 1975.
34. Babson, *op. cit.*, p. 88.
35. Quah, *op. cit.*, pp. 99-111.

36. See Chen P. S. J. *Social stratification in Singapore*, Department of Sociology Working Paper No. 12, Singapore, 1973, p. 13.
37. *Ibid.*, p. 12.
38. Quah, *op. cit.*, p. 109.
39. Information obtained from Ngoh (see [21]) and from Tuan Imam, a religious healer. I had a personal interview with the latter at his home on 9 April 1976.
40. Mechanic D. *Mental Health and Social Policy*. Prentice-Hall, Englewood Cliffs, N.J., 1969, p. 69.
41. See Colson A. C. *The Prevention of Illness in a Malay Village: an Analysis of Concepts and Behavior*. University Microfilms, Ann Arbor, Mich., 1970; Raja, *op. cit.* Tuan Imam (see [39]).
42. Quah, *op. cit.*, pp. 107-108.
43. The differences between these types of Malay healer are explained in detail by Gimlette J. D. *Malay Poison and Charm Cures*. Oxford University Press, London 1929; and Colson, *op. cit.*, among others.
44. *Ibid.*
45. Hassan R. A note on the developmental process in Singapore. *J. Southeast Asian Studies* 5, 88, 1975.
46. See Frankenberg and Leeson, *op. cit.*, pp. 261-262.