A comparison of health care in Singapore and New Zealand:

The influence of society and culture

Catriona M Ramsay MBChB (Aberd) FRNZCGP DRCOG PGDipTravMed

***Catriona Ramsay** completed undergraduate medical training in Scotland in 1977, and then trained in general practice before moving to Singapore in 1981. She lived and worked there for 12 years and immigrated to New Zealand in 1993, where she works in student health, is an undergraduate medical teacher and is working towards further postgraduate qualifications in travel and migrant medicine.*

ABSTRACT

Singapore and New Zealand are demographically similar but differ in ethnicity and cultural history. The development of the health system in these two countries has been influenced by local paradigms and cultural expectations in health care users, providers and funders. Whilst the main model for professional health care in both countries is biomedicine, the underlying culture and illness beliefs have shaped the health care model. The Singapore health care system, and in particular the use of a medical savings account (MSA), has been admired internationally. In New Zealand, the health care system has been re-organised several times in the last twenty years and a Singapore-style medical saving account has been suggested as one possible future system. Since the health care system in each country has developed in response to a specific culture, it may not be possible to transport either health care system into a population with different belief systems, demographics and underlying social conditions.

Key words

Health care systems, culture, Singapore

Introduction

Kleinman[1] has suggested that health care systems develop as a complex interplay between the health care professions, the folk sector of health care, which includes traditional and alternative medicine, and the popular sector in which illness is first defined and health care initiated. Within this popular sector, the illness beliefs and health paradigms of individuals, families, social groups and communities influence the culture of the society. In this paper, the health care systems in two countries are compared. These countries are demographically similar but culturally disparate.

Table 1 shows a comparison between the population demographics in Singapore and New Zealand. These are broadly similar except for ethnicity, income and infant mortality. However, the structure and delivery of health care are significantly different. This paper will explore these differences and consider the question of whether the health care system in one country could be used effectively in another.

Health care in Singapore

In Singapore, health care is financed from taxes, employee medical benefits, 'Medisave', private insurance and user part-charges.[5] The public sector provides 80% of hospital care, with a sliding scale of patient charges. Twenty per cent of primary health care (PHC) is subsidised through 17 government primary health care 'polyclinics', with additional funding for general practice (GP) access for the 'needy elderly'.[5] Other PHC is largely though private GPs. However, patients sometimes self-refer to private specialists, such as seeing a gynaecologist for a routine cervical smear.

'Medisave' is a compulsory medical savings account from taxable income that can be used for public or private in-patient care either for an individual or for a close relative and there are three additional government systems, Medishield, Medifund and Eldershield, which cover major prolonged illness or destitute patients.[5]

The stable political situation in Singapore has facilitated a long-term view by health care planners. Until the early 1990s Singapore had a marked emphasis on secondary health care, with a perceived shift to a technology-driven medical profession.[6] However, from 1992 onwards there has been an increased emphasis on primary health care (PHC) in the undergraduate medical course, although specialist out-patient clinics remain over-utilised whilst GPs are underutilised.[7]

Health care in New Zealand

In 2001, 78% of health expenditure in NZ came from government fund-

ing, with 8.2% of the gross domestic product spent on health care[8] (approximately the OECD median). GPs act as gatekeepers for access to secondary care, including private care. Payment methods for GPs include 'user-pays' and partial subsidies and a third of the population has private insurance, which accounts for about 7% of health expenditure. In contrast to the relative stability in Singapore, the provision of publicly-funded health care in NZ has been re-organised and re-formed several times in the last 20 years.[9] Most recently, primary health care organisations (PHOs) based on capitation have been introduced. The stated aim of this reform is the reduction of inequalities between different population groups in order to improve the overall health of the population. Health provision is targeted towards certain groups, particularly, but not exclusively, Maori, in which the health outcomes have been identified as poorer.[10]

In order to make a comparison between these two systems, it is useful to consider the ideology of both the health care funder and the consumer in Singapore and New Zealand. Sometimes these ideas and beliefs are stated openly in published information, but some are more subtle, although they may be inferred from the behaviour of the patient and the funder. These subtle underlying beliefs may be operating even when an organisation or an individual is unaware of the ontological or belief paradigm that influences their decisions. Some of the key points when considering these two systems are the value placed on individual responsibility and choice, the acceptability of paternalism, and the prevalence of Confucianism or Judeo-Christian ethical beliefs. These ideas and beliefs may differ between the funder, the provider and the consumer of health care within a given society.

Table 1. A comparison of selected population demographics in Singapore and New Zealand (Based on Singapore 2000 census data,[2] StatisticsNZ data[3] and World Bank 2003 data[4])

	Singapore 2000	New Zealand 2001
Total resident population ('000)	4017.7	3886.0
Sex ratio (males/1000 females)	998	963
Ethnicity	76.8% Chinese	80% European
	13.9% Malay	14.7% Maori
	7.9% Indian	6.5% Pacific people
	1.4% other	2.9% Chinese
		1.7% Indian
Below 15 years (%)	21.5%	22.0%
15–64 years (%)	71.2%	66.2%
Over 64 years (%)	7.3%	11.9%
Median age in years	34.0	34.7
Per capita Gross National Income (GNI) (both US$ in 2003) and world ranking	$21,230 29th	$15,870 40th
Crude birth rate/1000 population	10.30	13.42
Infant mortality/1000 births	2.50	5.14

Funding paradigms

The Singapore Ministry of Health (MOH) states that the basis for funding the public health system is *'based on individual responsibility, coupled with Government subsidies to keep basic health care affordable'*.[5] This philosophical approach incorporates the belief that patient part-charges are an incentive for people to care for their own health and that free health care is a disincentive to self-care. The Singapore government could be viewed as having a paternalistic role in this and other government policies such as the 'two-child' policy and the 'three or more if you can afford it' policy.[11]

In Singapore, funding for basic health care is weighted towards secondary care, suggesting that the prevailing model is the biomedical disease mode. This is reflected in improvements in mortality outcomes from medical care intervention (secondary prevention) rather than from primary prevention.[12]

However, the illness behaviour of many health care consumers or 'patients' suggests that the underlying patient paradigm is that self-funded advice and 'gentler' treatment from a traditional medicine carer is preferable for most PHC, whilst subsidised secondary care is appropriate for serious disease where 'stronger' Western medicine is needed. The congruence of patient preferences with funder philosophy may be one reason why the Singapore system is highly acceptable to the consumer and is perceived as good value for money. In addition, Confucianism is a strong influence in the majority Chinese population, and a paternalistic forward-looking role from those in authority is valued within this paradigm.

In Asia, Confucianism is a prevalent paradigm affecting decisions about how to live and how to make ethical decisions. It is generally not perceived as a religion. Health professional training will also incorporate features of the Judeo-Christian ethic, particularly when these professionals have been trained overseas in traditional Western medical schools. The expected goal of a Confucianism-based health system is to offer a family-orientated, non-individualised basis for resource allocation.[13] The core of Confucianism could be described as *ren-ai*, or 'humanity', with high value placed on filial piety (*xiao*). There is a strong emphasis on relationships and interactions with others, rather than individualism. In addition, the minority Moslem population in Singapore (mostly Malay and Indian) is influenced by Islamic traditions. Quranic ethics emphasise gratitude to parents, teachers and elders.[14] All three main ethnic groups consider that caring for family and respect for elders are important values. This respect includes those in au-

thority, but it is particularly strong when related to caring for ageing parents. This paradigm is congruent with the expectation that those family members with an adequate Medisave balance will use this to pay for health care for poorer family members.

In New Zealand there is a publicly funded core of health care and disability support services, with services outside the core being left to an individual's own responsibility. The underlying paradigm is the biomedical model. However, the application of this paradigm in funding may be less congruent with the biopsychosocial patient-centred model that influences the behaviour of general practitioners (GPs) and some consumers of health care. In addition, Judeo-Christian ethical values influence these funding decisions. One important principle of these values has been expressed as 'love your neighbour as yourself' where the neighbour is anyone in need.[15] This ethical paradigm has an emphasis on individual responsibility and rights but also equity and fairness, particularly in the provision of health care for individuals, including non-related people, who are less able to provide for themselves. These individuals include children, those with disabilities and those within disadvantaged ethnic groups.[16]

There is a particular emphasis on Maori health care within the new PHO model. According to the NZ Code of Health and Disability Services Consumers' Rights,[17] there are four cornerstones to Maori health: *Te Wairua Maori*, the life-force that determines who you are, what you are and where you are going, linking a person to ancestors and descendants; *Te Hinengaro* which recognises that mind, body and feelings cannot be separated from body and soul, *Te Tinana*, the physical body or present representation of the ancestors, and *Te Whanau*, or linking of relationships from a common ancestor. These factors influence the provision of funding but may, or may not, be inherent within the illness beliefs of an individual New Zealand health care consumer.

The dominant illness beliefs of health care consumers

In Singapore, many patients express a strong belief that external influences are the causative factors in disease and that disease may be prevented, modified or cured by counteracting these external forces. There is the concept of opposites, with a belief that healthiness happens when there are equal amounts of opposing, but complementary forces. 'Yin' is the feminine, negative principle in nature, and is 'cooling' to the body and 'yang' is the masculine, positive principle in nature, 'chi' and is 'heaty' to the body.[18] Rebalancing these forces, usually by changes in diet or herbal remedies, can treat or prevent disease. A traditional Chinese medical practitioner considers not only the patient's symptoms but also their environment and emotions in order to assess the area of imbalance that requires strengthening in order to restore harmony.[19] Although internal forces, such as the emotions, are recognised as causing illness, the link between emotion and more generalised forms of ill health such as fatigue or tiredness is not generally recognised or accepted by patients in Asia, and mental unwellness, such as depression, may present as somatization.

These beliefs about illness causation influence the patient's expectation of 'Western' medicine, and may explain the co-existence of two apparently separate health delivery systems. Many patients expect a prescribed treatment (such as an antibiotic) for an illness. However, Western medicines are considered to be excessively 'yang' and may be taken in smaller doses or for less time than has been prescribed. Patients pay for remedies from an alternative practitioner, such as a Chinese herbalist, and use these remedies in parallel with or instead of Western medicines.

Chinese Singaporean patients often expect to be told what foods to eat, particularly for certain types of illness (such as avoiding shellfish after a surgical operation), since dietary choices are seen as important in assisting or impeding the healing process. Similarly, there are strongly held cultural beliefs about diet and behaviour in the perinatal period when Chinese, Hindu and Moslem women are expected to remain at home with their baby. Among Chinese women, this can include the avoidance of hair-washing and bathing since it is considered that dampness can be too cooling and may lead to subsequent rheumatism.[20]

Singaporean patients generally view doctors as authority figures, respect them and expect them to be paternalistic. Within Singapore society, the idea of preserving harmony and the concept of 'face' is of great importance. A patient may appear to understand and agree with the diagnosis and proposed treatment, whilst inwardly disagreeing and not intending to comply, since the individual may be reluctant to challenge the authority of the doctor. This is because overt non-acceptance of a request from an authority figure would disrupt harmony. However, this harmony is preserved if the patient agrees but is subsequently non-adherent to the treatment. This notion of 'preserving face' is an important concept in many relationships in SE Asia.

By contrast, in New Zealand many patients appear to interpret their symptoms on the basis of a biomedical paradigm. There may be little recognition of the possible preventive role of the 'bodily harmony' of a balanced lifestyle. However, during a patient-centred consultation patients may express other beliefs about illness. Many patients use a variety of alternative therapies which are not 'evidence-based', but in which patients may have faith, particularly when an illness is considered to be terminal or untreatable by conventional medicine.

The Maori concept of *whanau ora*, sitting as it does at the interface between individualised and population-based health care, cannot easily be encompassed within Westernised paradigms. It is of interest that, when compared with European ideas about health, these Maori concepts may share some common themes with Confucian

paradigms in that health care is family-orientated and not individualised.

Discussion

The Singapore health care system and in particular the use of a medical savings account (MSA) has been much admired internationally. Would this form of health care system work well if it was transported to New Zealand? As has been discussed, the Singapore health care system has developed in response to both overt and covert beliefs about the nature and cause of illness and by patients 'explanatory models' of illness and their illness behaviour. It reflects what is valued in a Confucianism-influenced society, particularly filial piety and paternalism. In addition, since independence in 1963, the democratically-elected government (the People's Action Party) has not changed. In a society with this degree of political stability and where a paternalistic government is acceptable, the health care system has evolved to reflect the underlying belief systems that influence the state, the culture and personal values. Changes that are perceived as beneficial to long-term population health can be introduced with minimal concern about the consequences of short-term electoral unpopularity. Currently the prevailing illness beliefs and societal ethical values in Singapore are congruent with the philosophy used by the Singapore MOH in funding decisions. However, this may change with increasing westernisation of both the medical workforce and patients, and a slowing in the birth rate due to social engineering policies. It is likely that Singapore will continue to shift resources to primary and preventive health care in order to meet the future health needs of its population.

By contrast, in New Zealand paternalism and filial piety are not highly valued in European society, whereas individualism, fairness and equity are more strongly weighted. The recent changes to the New Zealand health care system reflect the overt and covert beliefs of health care funders. This may be partially congruent with the disease and illness beliefs of health care providers and consumers, but may also reflect the transient nature of political power in NZ. A medical savings system in which employed individuals are responsible for funding health care for less well-off family members might be perceived as inequitable and politically unpopular. NZ primary health care is at a point of transition with increased patient participation and a widening of the variety of practitioners in funded primary health care organisations. It will be interesting to see what effect this will have on the prevalence of the biomedical model as a basis for funding, since this model may fit the illness beliefs of only some patients and health care providers.

A comparison of the health care systems in Singapore and New Zealand suggest that these health care models develop in response to particular paradigms of illness and health care. It may not be possible to transport a 'model' health care system into a population with different paradigms, demographics, or underlying social conditions.

Acknowledgements

This paper was originally written as an assignment for a postgraduate paper: 'Core studies in Medical Practice' GENA 820, through the Department of General Practice, University of Otago. I would like to thank the course tutors for their valuable feedback and assistance.

References

1. Kleinman A. Patients and healers in the context of culture. An exploration of the borderland between anthropology, medicine and psychiatry. Comparative Studies of Health Systems and Medical Care. Berkeley: University of California Press; 1980. 3:27–70.
2. Accessed on 2 Mar 2005 via: http://www.singstat.gov.sg
3. Accessed on 2 Mar 2005 via: http://www.stats.govt.nz/census/default.htm
4. Accessed on 7 Mar 2005 via: www.worldbank.org/data/databytopic/GNIPC.pdf
5. Accessed via http://www.moh.gov.sg
6. Khoo CY. The doctor's role in a high tech world. 1992 Singapore Medical Association lecture delivered at the 23rd SMA National Medical convention. Accessed on 8 Mar 2005 via http://www.sma.org.sg/cmep/medical_ethics/MEA1A/1992.doc
7. Goh LG. The road ahead. Medicine in Singapore in 2004. SMA News 2004:36(1);4-5. Accessed on 7 Mar 2005 via: http://www.sma.org.sg/sma_news/3601/healthcare_glg.pdf
8. Huber M, Orosv E. Health expenditure trends in OECD countries,1990–2001. Health Care Financing Review 2003:25(1); 1–22.
9. Cumming J, Mays M. Reform and counter reform: How sustainable is New Zealand's latest health system restructuring? Journal of Health Services and Research policy. 2002; 7 (suppl 1):46–65.
10. Implementing the New Zealand Health Strategy 2003. Minister of Health 2003, Wellington Dec 2003 (accessed on 7 Mar 2005 via: http://www.moh.govt.nz/moh.nsf/wpgIndex/Publications-Online+Publications+Contents)
11. Mui TY. Singapore's three or more policy: the first five years. Asia Pacific Population Journal 1995; 10(4):39–52.
12. Niti N, Ng TP. Temporal trends and ethnic variation in amenable mortality in Singapore 1865-1994: The impact of health care in transition. International Journal of Epidemiology. 2001;30(5):966-973.
13. Fan R. Reconstructionist Confucianism and health care: An Asian moral account of health care resource allocation. Journal of Medicine & Philosophy. 2002; 27(6):675–682.
14. Rahman A, Amine C, Elkadi A. Islamic Code of Medical Professional Ethics. In Veach RM editor, Cross Cultural Perspectives in Medical Ethics: readings. 1989; Boston: Jones and Bartlett publisher: p120–6.
15. Luke 10: 25-37. Leviticus 19:18. The Christian Bible and the Jewish Torah
16. Rudman S. Concepts of person and Christian ethics. Cambridge. Cambridge University Press;1997.
17. The Health and Disability Commissioner. The Code of Rights and Maori Concepts of Health 1999. Accessed on 7 Mar 2005 via: http://www.hdc.org.nz/page.php?&tpage=publications&tpublication=42
18. Eckert A. Chinese medicine for beginners. Rocklin, California: Prima Publishing; 1996.
19. Kleinman A. The healers: varieties of experience in doctoring. In: the illness narratives: suffering, healing and the human condition. New York: Basic Books; 1988. p. 209-226
20. Kim-Godwin YS. Postpartum beliefs & practices among non-Western cultures. The American Journal of Maternal/Child Nursing 2003; 28(2):74-80.