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Health Care Systems in Europe and Asia
Edited by Christian Aspalter, Yasuo Uchida and Robin Gauld

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Routledge
Taylor & Francis Group
LONDON AND NEW YORK

First published 2012
by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Simultaneously published in the USA and Canada
by Routledge
711 Third Avenue, New York, NY10017

Routledge is an imprint of the Taylor & Francis Group, an informa business

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Library of Congress Cataloging in Publication Data

ISBN 978–0–415–67168–2 (hbk)
ISBN 978–0–203–15799–2 (ebk)

Typeset in Times New Roman by Prepress Projects Ltd, Perth, UK

Printed and bound in Great Britain by
CPI Antony Rowe, Chippenham, Wiltshire

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Robin Gauld

Singapore's health system was ranked sixth in the world in the World Health Organization (WHO) report of 2000, *Health Systems: Improving Performance* (WHO, 2000). The WHO ranking implied that Singaporeans have access to a system that is highly effective in terms of contributing to low morbidity and mortality rates and high life expectancy; that the system is responsive in that it delivers on principles of choice, user-friendliness, and timely access to high-quality care and support services; and that funding is progressive with the existence of redistributive policies aimed at delivering equitable access to health services.

Certainly, there is evidence that provides strong support for the WHO ranking. Infant mortality in Singapore in 2009, at 2.3 per thousand live births, was low compared with other parts of the developed world and developed East Asia (the average for the Organisation for Economic Co-operation and Development [OECD] in 2007, for instance, was 6.1 per thousand; Japan's rate was 2.6 per thousand; South Korea's was 4.1 per thousand). Singaporeans also have long life expectancy. In 2010, male life expectancy at birth was 79.5 years and for females it was 84.9, both of which were above the OECD average. Childhood immunization rates for major diseases are also high, at around 95 percent.

These figures are achieved against a background of one of the most interesting factors about the Singaporean health system. This is the comparatively low expenditure on health care. In 2008, total expenditure on health care was 3.1 percent of gross domestic product (GDP), which is well below the OECD(34) average of 8.5 percent. This low level remains a constant source of interest among countries looking for lessons around how to provide high-quality care, with good access and at reasonable cost. In addition, and in stark contrast to most European countries, the public portion of health spending in Singapore is around 32.6 percent, considerably lower than the United States (45.5 percent) or the average for OECD member countries (72.2 percent) (WHO, 2010; see Table 9.1).

Singapore, of course, has some advantages over other countries, particularly that it is a city-state with the entire population of just over 4.5 million living in close proximity to one another. This means it benefits from economies of scale with services concentrated in a small number of highly advanced hospital and other health care facilities. Other countries, with people spread across wide geographic areas, require more hospitals and service delivery locations and therefore more infrastructure. Another advantage is Singapore's status as a "tiger" economy, with

Table 9.1 Comparison of health care indicators in Singapore, Sweden, Iceland, Germany, and Luxembourg

	Singapore	*Sweden*	*Iceland*	*Germany*	*Luxembourg*
Life expectancy at birth (years)	81	81	82	80	80
Healthy life expectancy at birth (years)	73	74	74	73	73
Infant mortality rate per 1,000 live births	2	2	2	4	2
Adult mortality rate per 1,000 population	64	62	56	78	79
Maternity mortality rate per 100,000 live births	14	3	4	4	12
Doctors per 10,000 population	15	36	38	35	29
Nurses and midwifery personnel per 10,000 population	44	116	101	80	104
Hospital beds per 10,000 population	32	21	75	83	63
Total expenditure on health (percentage of GDP)	3.1	9.1	9.3	10.4	7.1
General governent expenditure on health (percentage of total)	32.6	81.7	82.5	76.9	90.9
Per capita expenditure on health (PPP, US$)	1,643	3,323	3,323	3,588	5,734

Sources: WHO (2010) and OECD (2009).

a history of very strong economic growth driven by direct foreign investment, trade, and one of the world's busiest ports (Holliday and Wilding, 2003).

Singapore also has the advantage of having a strong paternalistic government that has closely managed the development of the health system and done a relatively good job of this. Underpinning the government's health policies and the health system is the philosophy of "shared responsibility," that "government will subsidize health care to make it affordable, but Singaporeans able to do so must fork out their fair share too" (M.K. Lim, 2004a: p. 85). Coupled with this is the notion that people should know what their health care is costing and how much they are personally spending on this, and that there should be incentives to focus people on staying well. Naturally, the health system, especially the arrangements for funding, is designed to reflect these principles (Gauld, 2005). Finally, the Singapore government has long sent a message to the public that they need to practice parsimony in their use of health care resources. The government has also been consistent in promoting the idea that is the responsibility of every Singaporean to stay fit and be healthy.

In keeping with the above, the Singapore government is deeply involved in regulating all aspects of the health system and plays a key role in "balancing" it with a mix of policies that control overall expenditure as well as the actual costs that patients pay for service delivery (one of the principles underpinning Singapore health policy is that patients should personally pay a portion of service costs) (Gauld *et al.*, 2006). Furthermore, the government is proactive in that it pays close attention to current and future pressures facing the health system. Thus, in recent years there have been various incremental adjustments to different parts of the system.

The present arrangements for funding were established in 1984. The backbone and most widely discussed part of the funding system are Medical Savings Accounts (MSAs). These are individualized insurance accounts, with minimal risk pooling, which are used by patients to co-fund services. As discussed, the idea behind these is that patients should pay at least some of their health care costs and that there should be an incentive for individuals to focus on being healthy. However, often overlooked is the fact that MSAs and related arrangements fund only around 10 percent of Singapore's total health care costs. The remainder comes from employer benefits (35 percent), government subsidies (25 percent), patient co-payments at point of service (25 percent), and private insurance (5 percent).

As discussed below, the scope of MSAs has evolved over the years in keeping with service demand and the capacity for providing an adequate funding mechanism, with new schemes and rules for use periodically created. Presently, there is debate around whether risk pooling of MSA money would be a more effective way of funding future health care needs (Asher and Nandy, 2006). If risk pooling were increased this would alter one of the fundamentals of the Singaporean model: the focus on individual responsibility.

Service provision in Singapore is a public–private mix. Around 72 percent of hospital admissions are in public hospitals, which are organized into two "clusters" that are required to compete but also to collaborate with one another. In contrast, public clinics provide only 20 percent of primary care general practice consultations. Singapore's hospitals provide services that are among the most advanced in the world. It has not been uncommon for Singaporean surgeons, largely working in private institutions, to perform world-first operations such as the attempt, in 2003, involving a team of 30 surgeons, to separate adult Siamese twins conjoined at the head (Nathan, 2003). A central tenet of present Singapore government policy is promoting and investing heavily in biotechnology and life sciences research to establish this as a core industry and future driver of the economy. Over the longer term, this can only be of benefit to the Singaporean population and health system.

The operation of the health care system

The Singapore health system, in common with most health systems, is regulated and monitored by the government's Ministry of Health, which is, in turn, answerable to the Minister of Health. Thus, the government of Singapore and the Health

Minister set directions for health policy, which the Ministry implements, although, as with most developed countries, the Ministry does a considerable amount of analytical and advisory work that informs government policymaking (Blank and Burau, 2004). The Ministry itself is a large centralized agency, reflecting its widespread involvement in the health system. It is organized into three groups. The Policy and Corporate Group has divisions that are responsible for strategic planning, finance (including issues around MSAs), corporate communications, and so forth. The Professional Group contains divisions dedicated to epidemiology and disease control, health regulation, workforce standards and development, clinical quality improvement, health services integration, and health information management. The Operations Group houses divisions of communicable disease, resource management, operations strategy and readiness, and a legal branch.

In 2006, there were around 11,545 beds in 29 hospitals and specialty centers across Singapore, with a ratio of 26 beds per 10,000 population. Thirteen of these institutions were public, and these tend to be larger ranging in size from 185 to 2,064 beds. The 16 private hospitals have from 20 to 505 beds. Public hospitals accounted for around 72 percent of all hospital admissions. Average occupancy was 75 percent and average length of stay was approximately 4.7 days. The health workforce in 2006 included 6,931 registered doctors at a doctor–patient ratio of 1:650, or 15 doctors per 10,000 people (in 2006). Some 3,505 doctors were employed in the public sector, 2,966 were in private practice, and 460 were not in active practice. There was a total of 20,927 registered nurses with 11,574 in the public sector and 6,109 in the private (3,244 were inactive). The nursing ratio was 1:210, or 47 per 10,000 population (in 2006).

Public hospitals are run as though they are private corporations. They are under government control yet set up as state companies, which gives them managerial flexibility and an incentive to focus on providing high-quality patient care. They receive state subsidies but patients are also charged for all services received. In this way the government, as the dominant hospital provider, plays a key role in influencing the supply of hospital beds, the availability and introduction of new and high-technology services, and the levels at which costs to patients are set. It also provides something of a standard against which private hospitals establish their prices. Notably, the government has put considerable effort over the years into controlling cost growth. Key strategies include limiting the purchase of expensive technology and rationing access to this, as well as restricting the number of doctors allowed to practice in Singapore on the assumption that more doctors will drive up overall costs (Asher and Nandy, 2006; Barr, 2005).

Among the public institutions are five advanced general tertiary and emergency service hospitals, a women's and children's hospital, and a psychiatric hospital. There are also six specialty centers that provide specific services for cancers, heart disease, eyes, dermatologic conditions, neuroscience, and dentistry. The public hospitals are organized into two service delivery clusters: the National Healthcare Group, which hosts the National University Hospital; and Singapore Health Services (SingHealth), which contains the Singapore General Hospital. The two clusters were developed in part to eradicate duplication that had occurred

as a result of hospital corporatization in the early 1980s. The clusters are designed to be vertically integrated service networks that provide the full range of services from primary through to tertiary (Holliday, 2003). Within each cluster, collaboration among providers is expected with the aim of delivering high-quality, comprehensive, and cost-effective services. However, the clusters are also expected to engage in "friendly" competition with one another around issues such as quality of care and facilities, financial performance and service pricing, innovation, and so forth. Each cluster also features common electronic patient records, accessible across cluster service delivery sites but also transferable between the clusters. This is one example of where the clusters are expected to collaborate. Allied with each cluster are other "community" hospitals that provide less advanced services, as well as primary care "polyclinics." Each cluster is also host to a selection of the six national specialty centers.

Public hospitals feature different classes of beds that receive differing government subsidy levels, although all patients receive the same quality of medical care and range of interventions for comparable conditions. Public hospitals routinely charge patients for their services and the costs to patients will vary depending on the choice of bed class. A standard Class C bed will be in an open hospital ward. Class B beds will be in a shared room. Those who choose Class A beds will usually have their own room with various hotel features such as their own bathroom, television, and food menu.

There have been various reforms to public hospitals over the years aimed at improving efficiency and effectiveness, as discussed below. More recent initiatives include the introduction, in 2005, of global budgeting whereby hospitals receive a fixed annual sum of money adjusted in accordance with the historical case-mix per patient treated. Another initiative is the move to "step" patients down from tertiary hospitals, once treatment such as major surgery is complete, for recovery in less expensive community hospitals by adjusting pricing structures (the fees patients pay) to reflect the different institutional settings.

There have also been initiatives aimed at better coordinating services for the populations of specific geographic areas. An example is a pilot community-based initiative launched in 2004 in Jurong, a satellite town of 300,000 people. Called HealthConnect, the aims include coordinating multiple public and private providers from primary care through to hospitals, and making care patient-centered and reorganizing services around them. HealthConnect has a particular focus on building public–private partnerships around care of the elderly and people with chronic disease and moving various diagnostic and treatment services from hospital to more accessible community settings. Another aim is to provide the population with the tools to better manage their personal health so as to avoid hospitalization. Specific initiatives include regular screening for chronic disease of all residents, with targeted follow-ups for those deemed to be at high risk, as well as a health information center, telephone help-line, and comprehensive web-based information. Information technology is one of the key drivers of HealthConnect, with all clinics and hospitals in the area linked electronically and using common electronic patient records (see JHC, 2008).

Publicly funded primary care is provided through 18 polyclinics, which are divided evenly between the two service delivery clusters. Polyclinic patients pay a highly subsidized rate of around S$8 on average for a consultation. Fees are subsidized up to 75 percent for those over 65 and under 18 years of age. All other Singaporean citizens receive a 50 percent subsidy. The polyclinics are intended to provide comprehensive primary care including medical consultations, follow-ups for patients following hospital discharge, pharmacy services, and various public health services such as immunization, screening for disease, and health education. There are incentives for those who can afford it to seek primary medical care in the private sector as there tend to be lengthy queues at polyclinics, with patients sometimes waiting several hours for a consultation. However, anyone regardless of income can seek treatment at a polyclinic. Polyclinic consultation times are also shorter on average, with polyclinic doctors seeing around 50 to 60 or more patients in a day; private sector counterparts average around 40 patients (see MOH, 2008).

The 80 percent of Singaporeans who patronize private general practitioners are served by around 2,000 separate clinics. These receive no government subsidy, but practitioners are required under government regulation to advertise their charges. In early 2007, the Singapore Medical Association abolished a process of providing fee guidelines that had been in place for two decades so as to satisfy new competition law. Practitioners were not compelled to follow the Association's recommended price range, but their fees tended to be reflective of this.

As a multi-ethnic but predominantly Chinese society, Singapore has many practitioners of complementary and traditional medicines. Most work outside any regulatory system. Research indicates that 76 percent of the Singaporean population use complementary and alternative medicines (M.K. Lim *et al.*, 2005). Of these, 88 percent favor traditional Chinese medicine (TCM), which is the predominant alternative to modern Western medicine and perhaps natural in a population that is 77 percent Chinese. Reflecting developments elsewhere, such as in Hong Kong, the government passed the TCM Practitioners' Act in 2000. This initially required the registration of all practicing acupuncturists and subsequently of all TCM practitioners. Traditional Chinese medicine practitioners must therefore be registered with the TCM Practitioners' Board and hold a valid practicing license. The Board, in turn, oversees practice standards, including adherence to its code of ethics. Since 2005, graduates from recognized courses in Chinese herbal medicine dispensing have also been able to list voluntarily with the TCM Board.

Health care quality is today a core theme across the Singaporean health system, with the government proud of the fact that several hospitals have received accreditation by the Joint Commission Initiative from the United States. Quality efforts commenced in the early 1980s and, following corporate ideals and the restructuring of public hospitals into corporate entities, were largely focused on service quality, as opposed to the quality of clinical care. As such, there was an emphasis on certification of service delivery standards (ISO 9000 and so forth) and on producing well-trained doctors, and every hospital was required by the government to have a quality committee and to promote quality circle arrangements that allow

staff to share ideas about how to improve service quality. The assumption was that excellent facilities and health professionals would result in good care and outcomes (M.K. Lim, 2004b).

Since around 2000, and largely inspired by the report into medical error of the United States Institute of Medicine (Institute of Medicine, 2000), there has been an emphasis on clinical quality improvement with the government taking a leading role. For instance, in 2000, the government required that all hospitals – public and private – participate in the Maryland Quality Indicator Project. This has meant comparative data is routinely collected across a series of hospital quality indicators including mortality rates, unscheduled post-care readmissions, and infection rates. Patient satisfaction surveys are also routinely conducted, with feedback used to plan improvements. In 2002, a new branch was created within the Ministry of Health charged with driving quality improvement across both the public and private sectors. The Ministry has since been involved in collecting data on adverse events. Data has not been made public, but a system for reporting sentinel events and studying the root causes of these has been put in place. The Ministry has begun to publish reports comparing clinical outcomes for procedures across different hospitals (e.g., Ganesan, 2006), and has been encouraging hospitals themselves to publicize outcome data. The Ministry has also developed a Health Care Quality Improvement Fund, which grants money to support innovative quality and safety initiatives.

In 2003, continuing medical education (CME) was made compulsory for all practitioners registered with the Medical Council. There has been an increasing emphasis on service integration which was partly behind the clustering of public institutions. Continuing medical education programs have focused on forging strong working relationships between private general practitioners and public hospitals, particularly around developing shared care programs for specific conditions such as cancer treatment, which requires both hospitalization and various primary care interventions. Shared care arrangements have also become common among general practitioners and private hospitals. In keeping with shared and integrated care notions, there has also been a strong emphasis on development of evidence-based clinical guidelines and protocols for the management of common diseases, such as heart disease, strokes, diabetes, and asthma, which have been made available to all public and private health professionals. As with CME, such approaches have meant that all professionals involved in the care process have been required to discuss and refine these processes (M.K. Lim, 2004b).

In 2006, the Minister of Health announced that Singapore would be committing to the World Health Organization Global Patient Safety Initiative aimed at reorienting health systems toward safety and sharing lessons among participants about quality improvement.

Financing of the health system, hospitals and medical goods

Medical Savings Accounts are at the heart of Singapore's financing model although, as noted, they fund only a small portion of total health care expenditure

and are not really a "public" financing mechanism because MSA finance is considered to be private. This said, MSAs are a government invention, closely monitored and regulated by government, and much of the money that comes from MSAs goes toward services provided in public institutions.

Medical Savings Accounts have been the subject of considerable international debate and also the object of foreign policymakers' attention, particularly from the United States for their potential as a private funding source and fact that they are designed to focus individuals on taking responsibility for their personal health expenditure (Robinson, 2005). Singapore's MSAs are a component of the government's Central Provident Fund, into which workers compulsorily pay to fund retirement and housing as well. Medical Savings Accounts are designed to help fund hospital and some associated services, but increasingly specific primary care and outpatient services are being added to the schedule of services that account holders are permitted to pay for. Furthermore, the scope of MSAs continues to expand in response to growing service costs, questions about the amount of money in accounts to pay for these, and demographic change. Medical Savings Account use is subject to several restrictions, such as the range of services allowed to be paid for and the total amount payable for any one health encounter, to ensure that individuals do not exhaust their funds. There are also different types of account aimed at different groups of people, in addition to a safety net arrangement for those without sufficient MSA funding.

Medisave

The original Medisave scheme was established in 1984. Today, Medisave accounts pay for only around 8 percent of total health care costs in Singapore (an additional 2 percent comes from the MediShield and Medifund schemes discussed below). It is compulsory for every person in the paid workforce to have a Medisave account, which is a personalized account, but managed by the government. Depending on their age, employees contribute between 6.5 and 9 percent of their income to Medisave. Contributions must continue until an individual's account reaches the Medisave Contribution Ceiling. This is adjusted each year to ensure adequate funding levels, and in 2010 was S$39,500. Once this limit is reached, funds are diverted into a special fund for those aged under 55, or a retirement fund for those over 55 years. Medisave accounts are tax free, interest bearing, and a part of one's estate on death. Risk pooling is limited to within families, meaning that only dependants can be paid for from an individual's account. Indeed, under Medisave regulations, this is how a dependant has their health care funded and there are many such people. As Reisman notes:

> Such transfers are believed to be in keeping with filial piety and "Asian values." Sharing will be of particular value to an aged parent who has used up his own Medisave or to an unemployable schizophrenic who has no contributions history. The labor force participation rate of the over-15 resident population is only 64.8 percent: 46.1 percent of women, 24.2 percent of men

> have no paid employment. Earning nothing, they are putting nothing into their Medisave nest-egg.
>
> (Reisman, 2006: p. 142)

Medisave accounts are primarily used to pay for hospitalization in an "approved" list of hospitals including both public and private. Account withdrawals may be made for doctor fees and allied services and equipment, daily ward charges, and surgical procedures, and are determined by a strict schedule of service fees that are set by the government. The scheme also allows payment, albeit with various limitations, for approved day surgery, psychiatric treatment, and maternity services. Reforms in 2006 were designed to allow payment for proactive community care of patients with chronic disease.

Patients in Class C hospital beds are required to pay 20 percent of costs, with the remainder subsidized by government. Medisave generally pays a significant portion of the 20 percent, meaning a personal co-payment is always required. Hence, the idea of "shared responsibility" for funding. If a patient's account is exhausted, other family members are allowed to settle bills from their accounts or arrangements can be made for future payments once new money is available in an account. Patients who choose B1 Class (20 percent government subsidy), B2 Class (65 percent subsidy), or A Class beds (no subsidy) face substantially higher co-payments. Medisave also pays for some outpatient services such as vaccinations, renal dialysis, cancer treatments, and *in-vitro* fertilization. From 2007, in recognition of the growing burden of chronic disease, payments of up to S$300 per year have been allowed for the treatment of diabetes, hypertension, and strokes; from 2009, payments of up to S$300 are permitted for psychiatric illnesses.

In 2009, there was just over S$45.8 billion in Medisave accounts (roughly four times Singapore's total annual health expenditure). Withdrawals from Medisave accounts for 2009 were S$661 million or around 1.44 percent of the total invested. Whether this considerable sum of money in Medisave accounts provides an adequate funding mechanism is an important question. As noted below, few Singaporeans are in a position where they do not have sufficient Medisave funds to help pay for their care. Yet it has previously been reported that around 17 percent of account holders have less than S$1,000 in their accounts, meaning that they are at high risk of exhausting their funds in the event of hospitalization (M.K. Lim, 2004a). In response, in 2004, the government considered increasing the level of risk pooling but, instead, adjusted contribution and benefit levels.

More recently, Asher and Nandy (2006) have suggested that Medisave itself is a flawed scheme and that there ought to be greater risk pooling to improve benefit coverage. The approach of periodically adjusting the existing system, they assert, will not provide for the needs of a rapidly aging population, which, over time, will place increasing demands on Medisave (in 2000, 6.8 percent were over 65 years old; in 2030, projections are that 14.8 percent will be over 65). Finally, Medisave benefits are skewed in favor of wealthier people and are, therefore, inequitable (Asher and Nandy, 2006; see Box 9.1).

Box 9.1 The health care system in Singapore: a summary

In Singapore, public institutions dominate hospital care, with private practitioners providing most primary medical care. Funding is a complex combination of public and private sources, with medical savings accounts a minor yet pivotal source.

The government plays a key role in the system with a policy and funding strategy that ensures high-quality care at comparatively low overall cost, while ensuring, through compulsory Medical Savings Accounts, that the public pay attention to their individual expenditure.

With rising health care costs and service demands, the government has experimented with various ways of promoting efficiency such as allowing private insurers to offer medical savings accounts. It has also added chronic disease coverage to savings accounts.

There is a strong focus in Singapore on preventive health care, that is, active health promotion and public health policy.

Despite featuring near the top in international health system rankings for quality of care and efficiency, Singapore's system is still a highly inequitable health care system, with a government share of only 32.6 percent of total health care expenditure.

MediShield

An optional addition to the compulsory Medisave is the "opt out" MediShield scheme. This was introduced in 1990 in recognition of the need for a low-cost scheme that would provide additional coverage for hospital costs resulting from catastrophic illness. Presently, around 54 percent of Medisave members have MediShield accounts, meaning that a considerable proportion of the population lacks catastrophe coverage (Asher and Nandy, 2006). MediShield premiums are paid for from Medisave accounts and premiums are dependent upon age with a basic plan ranging from around S$33 to $1,123 (prior to a 2005 reform aimed at increasing MediShield funds they were considerably cheaper). There is a claim limit per individual covered of S$50,000 per annum or $200,000 over a lifetime. Other limits on payouts include that patients pay a deductible, meaning that they personally pay the costs of any services provided that they come in below the financial threshold for MediShield payments to commence. Patients also personally pay the costs over and above daily MediShield reimbursement rates, providing strong incentives to patronize lower-class heavily subsidized public hospital beds. The limits on the scheme mean that MediShield pays, on average, around 60 percent of the costs that hospitals bill patients. MediShield is also limited to people under 85 years. The 2005 reforms opened MediShield to private insurers, who are now offering additional benefits to people who opt to take their insurance

with them. These cover private hospital stays, although there are higher deductible fees.

Those who want more comprehensive coverage and access to higher-quality surroundings can opt to pay the higher premiums for MediShield Plus. This is designed specifically for people on higher incomes and provides coverage for private hospitals and for the top two classes of beds in public hospitals. The 2005 MediShield reforms saw NTUC Income, a private insurer with links to the trade union movement, awarded the contract to manage MediShield Plus, meaning that the scheme is effectively separated from the government's Central Provident Fund.

Eldershield

The third type of MSA falls under the banner of Eldershield, a scheme introduced in 2002 to help pay for the care of people in older age once they are unable to care for themselves. Again, this is an opt-out scheme available to people aged 40 to 65 years. As of 2009, around 30 percent of Singaporeans had enrolled with the scheme. Eldershield payments can be made from Medisave accounts. As with other MSAs, there are restrictions on the monthly payments that can come from Eldershield accounts.

Eldershield reforms of 2007 had three aims: to increase Eldershield affordability for the general population; to increase benefit coverage; and to offer extended coverage for those who could afford this. Thus, whereas Eldershield accounts were initially offered by two private agencies, the 2007 reforms aimed to increase competition with the addition of a third insurer. This resulted in a general lowering of premiums. The reforms provided an increase on the cap on payouts to S$400 per month for up to six years (previously it was $300 for five years), therefore extending benefits. The reforms also saw the introduction of a second tier supplementary Eldershield scheme, also fundable from Medisave accounts. The supplementary scheme allows for payouts of up to S$1,000 per month for up to 10 years.

Medifund

It needs to be stated that Singapore is not a welfare state per se. However, in common with most developed countries, Singapore does have a safety net, known as Medifund, for those unable to subsidize their costs using any of the above three schemes. Indeed, it is not uncommon for patients to have difficulty financing co-payments and deductibles, or not to have accrued enough Medisave funds to finance their treatment. Medifund is, therefore, there to serve the approximately 12.6 percent of the Singaporean population who live below the poverty line as well as the considerable number who do not earn much more and who are most likely to require assistance (Reisman, 2006). This said, it has been calculated that only around 2 percent of Class C bed patients experience difficulty in paying their bills (M.K. Lim, 2004a).

Established in 1993 with a government injection of S$200 million, Medifund is an endowment fund that offers charity-style assistance paid for out of the interest that the fund generates. With subsequent funding injections, Medifund presently stands at around S$1 billion, but the government's target for the fund is S$2 billion. The interest from Medifund is distributed to public hospitals and a small number of voluntary organizations. Patients must then apply to the organization that they are receiving treatment from for Medifund assistance and they are means-tested in the process; they must also be admitted to lower-class beds. Virtually all applications are accepted, with rejections generally because applicants are found to have other means available such as a family member able to help out (Reisman, 2006).

Other mechanisms for funding health care

Much of the government's expenditure on health care goes toward subsidizing public hospitals so that the funds drawn from MSAs are minimized. Indeed, 75 percent of public beds are heavily subsidized. As such, the charges for most patients are a fraction of the actual cost. Patients in Class C beds pay only 20 percent of costs from their MSAs. Class B patients pay up to 80 percent of costs, whereas Class A patients pay full cost. Even then, full-cost beds continue to be cheaper than their private sector counterparts, leading Barr to suggest that such prices are in fact subsidized in order to create downward pressure on private sector pricing structures (Barr, 2005). As noted above, public hospitals are all corporate entities, required to run as private businesses and are free to set their own pricing structures. There is naturally some variation in these. In 2005, the Ministry of Health decided to publish comparative data on public hospital charges on its website in the endeavor to drive prices toward the lowest, and to give patients the tools to minimize their MSA costs. The exercise resulted in some price reductions (M.K. Lim, 2005). The two hospital clusters have also worked together to keep prices down. An example of this is the creation of the centralized Group Procurement Office, which manages the negotiation of bulk purchase prices on behalf of all public hospitals, including for pharmaceuticals (see section on pharmaceutical products below), and medical supplies.

In keeping with the fact that the Singapore government continues to extend services for underprivileged groups, a Primary Care Partnership Scheme was created in 2000 initially on a pilot basis and later extended to all eligible residents. The scheme was designed to provide subsidies for elderly people with disabilities, who are below a certain income, for services at participating private general practices and dental clinics near their homes. The scheme means such people no longer need to travel to one of the government's polyclinics, and pay only the polyclinic rate. Similar sorts of schemes have been developed by the hospital clusters. An example is the SingHealth General Practitioner Empowerment Program designed to forge closer working relationships with private general practitioners, which offers, among other things, rights to admit patients directly into SingHealth hospitals, quicker access to specialists, and better access to information about patients receiving hospital treatment.

Benefits in the public health care system

Singapore contrasts with developed European countries in that it is not a welfare state and makes no apologies about this. In this regard, there is no "public" health care system to speak of; patients are required to pay for all services. That said, features of the funding model ensure that all Singaporeans have access to basic health care through a polyclinic or C Class hospital bed. The extent to which access is equitable has been debated.

Despite receiving a high overall ranking by the World Health Organization in its health systems report of 2000, in terms of fairness of financing the Singapore system was given the rather low ranking of 101 out of 191 countries, implying that it favors wealthier people. This led Lim to suggest that the Singaporean system was founded on a different model (M.K. Lim, 2004a). This is that poorer people should not necessarily expect the same services as wealthier people (hence the existence of different bed classes), and that the wealthier are expected to use available funds, including from MSAs, to pay for better-class beds and private treatment, reducing the burden on more heavily subsidized services. Moreover, wealthier people are prohibited from applying to the Medifund scheme for aid, which was designed to ensure access to care for poorer people.

There have also been debates around the extent to which the Singaporean population have access to a full complement of services. MediShield, for instance, excludes claims on any disease that a patient acquired more than 12 months prior to joining the scheme, and there is no coverage for a list of conditions such as mental illness, congenital abnormalities, or AIDS-related illnesses (see CPF, 2008). This contrasts with the situation in a number of developed world tax-funded health systems, where access to such services is universal. Moreover, as Asher and Nandy note, MediShield "was structured in such a way that effectively no insurance cover was provided for the first seven days of hospitalization. The 2005 reforms have increased this period even further" (Asher and Nandy, 2006: p 81).

Remuneration for doctors and financing of hospitals, medical facilities, and goods

Although public hospitals receive some funding from patient charges and MSAs, the largest portion of their funding comes from the 25 percent of Singapore's total health expenditure that the government provides. The government does not make information readily available on how it allocates funding to public hospitals. Like many countries, hospital funding in Singapore is partly based on historical patterns of service utilization and this is how the "global budget" allocated to each of the two hospital clusters is established.

The global budgeting approach, of course, provides incentives for the clusters to work within certain service provision parameters and to look closely at how much they are spending on medical devices, facilities, human resources, and so forth. Hence the existence of a centralized Group Procurement Office that works on behalf of the two clusters to bulk purchase medical supplies and pharmaceuticals

for all public hospitals. Global budgeting also provides incentives to search for more efficient ways of working, especially in terms of developing initiatives such as the recent focus on primary care management of chronic disease that should serve to reduce the demand for hospitalization. Such initiatives are part of a coordinated strategy that also includes new allowances, as discussed above, for funding chronic disease management from MSAs. Public hospitals are also funded in part on the basis of a diagnostic-related group mechanism.

Doctors working in public hospitals and clinics are salaried in accordance with civil service pay scales, with a loading to recognize their medical expertise. As is common practice across many industries in Singapore, most also receive an annual bonus, which can be substantial. Public doctors with particularly heavy workloads, who bring additional money into the hospital as a consequence, are often paid extra in recognition. In contrast, a private sector doctor will build his or her income entirely from the number of patients and types of conditions he or she treats.

Pharmaceutical products

In primary care general practice settings and in common with many of its neighbors, such as Hong Kong, Singaporean doctors both prescribe and dispense drugs. Dispensing their own drugs means that they stand to make a profit and, in many cases, this also helps to subsidize consultation costs. Most private general practitioners have their receptionists or clinical assistants dispense prescription drugs for their patients. This means that professional pharmacists mostly provide over-the-counter medicines and pharmaceutical advice (Coleman, 2007). Patients, however, can also choose to have their prescription filled by an independent pharmacist, although this is rare, and the government has been looking at regulatory changes to ensure that private general practitioners clearly itemize the costs of both their consultation time and the pharmaceuticals dispensed. By contrast with the private sector, the government's polyclinics do employ pharmacists to do their dispensing.

All public hospitals have their own pharmacy departments. Many commonly used prescribed drugs that are listed on the government's Standard Drugs List are subsidized for both inpatients and outpatients, although MSA funds are not generally allowed to be used to pay outpatient prescription charges. This said, the recent changes to Medisave to fund chronic and long-term illness have included allowances for prescription medicines. Prices are kept down by the fact that the Standard Drugs List tends to include mostly generics; newer or branded drugs are not generally included and so patients will pay full cost for these. In addition, the Group Procurement Office calls for tenders to supply drugs, negotiates purchase prices, and undertakes bulk purchasing on behalf of all public hospitals. A key aim here is to drive prices down through use of monopsony power, while providing access to the best possible range of medicines.

All pharmacists must be registered with the Singapore Pharmaceutical Board, which oversees professional practices and standards, including requiring evidence

of continuing education as mandatory for continued registration. Membership of the Pharmaceutical Society of Singapore, which aims to promote the profession of pharmacy and provides various services such as an annual conference and continuing education services, is voluntary (Coleman, 2007).

Health promotion

Statistics suggest that health risks among Singaporeans are comparatively low. At around 14 percent, Singapore has one of the lowest smoking rates in the world, with considerably more men than women being regular smokers. However, there is concern at the increasing incidence of youth smokers. Obesity levels, at only around 6 percent of the population, are also low when compared with rates of well over 20 percent in many developed Western countries.

Health promotion and public health activities are centralized and under the firm control of government. Behind the above statistics is a strong emphasis on health promotion across the spectrum of Singapore health and public policy. Visitors to Singapore will note signs displayed in food markets that warn against unhealthy choices, while anti-tobacco campaigns and advertisements are ever present. There are also national fitness campaigns and workplace based fitness programs.

The Health Promotion Board, established in 2001 as an independent government-funded body, is the key agency responsible for promoting health and disease prevention with a vision to "build a nation of healthy and fit Singaporeans." It has a wide-ranging program that spans promotion of screening services, injury prevention programs, child and elderly health, physical activity and nutrition, smoking cessation, and AIDS education. The Board also provides extensive information services via its website, offices, and a telephone helpline (see HPB, 2008).

Responsibility for population-based public health is shared between the Epidemiology and Disease Control Division and the Communicable Disease Division of the Ministry of Health, along with the National Environmental Agency. The Ministry Divisions collect data, monitor the causes and incidence of disease, and provide related policy advice to the government. The Environmental Agency is charged with control of vector-borne and food- and hygiene-related diseases. For example, in 2007, it had around 300 officers working on controlling the environmental factors (eradicating mosquitoes and their breeding grounds) contributing to the incidence of dengue fever. At the time of writing, the government had undertaken a review of its infectious disease control legislation and was planning to introduce a series of new measures. These are designed to improve control in the event of an outbreak such as severe acute respiratory syndrome (SARS), by which Singapore was seriously threatened. The new measures include increased capacity to carry out public health surveillance, to close premises found to be responsible for an outbreak, to obtain information from patients, and to restrict public gatherings in times of emergency. There is also increased scope for penalizing those found to have been responsible for transmitting the HIV virus.

Development of the Singapore health system

Singapore has a history as a former British colony that achieved self-governance in 1959 and then complete independence in 1965. The present system for health care delivery in Singapore was preceded by a substantially different set of arrangements that reflect its history as a colony and then a developmental state. Thus, the focus in the early years was on establishing basic services. By the mid 1970s, Singapore boasted a range of hospitals and outpatient clinics and its doctor–patient ratio was improving (in 1960 it was 1:2573 people; by 1985 it was 1:972). However, despite the government's best attempts, increases in hospital beds were failing to keep pace with the growth of the population (in 1960 the bed ratio was 1:229 people; by 1985 it was 1:259) (L.Y.C. Lim, 1989).

By around 1981, the government commenced a process of limiting the number of hospital beds as a measure to keep costs down. In 1965, government expenditure on health care was around 50 percent of total health expenditure. By 1980, this had reduced to around 40 percent, but there was evidence that the public proportion of expenditure was on the increase, with corresponding reductions in the private proportion. Furthermore, the public health care system was closer in design to the universally accessible "national health service" model of Britain and other former British colonies such as New Zealand.

In 1983, in keeping with its determination to avoid the promotion of a "welfare culture" and associated "entitlement creep," the government introduced its National Health Plan, which outlined future directions for the health system and the place of MSAs within this. Central to the new philosophy of "shared responsibility" and fiscal responsibility that underpinned the National Health Plan was the corporatization of all public hospitals. These were to be run as government-owned businesses, under government control, but with a new responsibility for budget control and for improving the cost-effectiveness and quality of services delivery. Financial responsibility was similarly shifted to patients by the requirement to pay for at least some of the costs of hospital care (M.K. Lim, 2004a). The public share of health expenditure progressively dropped to around its current level of 32.6 percent.

Since the reforms of the 1980s, the basic structures for health care have remained relatively consistent. As discussed in this chapter, developments since have tended to be incremental adjustments to the rules around the various funding schemes. Of course, the government has also introduced new schemes to deal with emergent areas such as the increasing elderly population that Eldershield is aimed to cater for. It has also adjusted the focus of its policies and the health system, in reflection of international trends. Service integration is at the center of the creation of the two public hospital clusters formed in 2000, and service quality and safety have come to the fore, as has the proactive management and treatment of chronic disease in primary care settings.

References

Asher, M.G. and Nandy, A. (2006), Health Financing in Singapore: A Case for Systemic Reforms, *International Social Security Journal*, Vol. 59, No. 1, pp. 75–92.

Barr, M.D. (2005), Singapore, in R. Gauld (ed.), *Comparative Health Policy in the Asia-Pacific*, Open University Press: Maidenhead, UK.

Blank, R.H. and Burau, V. (2004), *Comparative Health Policy*, Palgrave Macmillan: London.

CPF (2008), General Information on Medisave and Medifund, www.cpf.gov.sg.

Coleman, V. (2007), Pharmacy in Singapore: Comparing Experiences in the UK and Asia, *Hospital Pharmacist*, Vol. 14, pp. 96–8.

Ganesan, G. (2006), Lasik Surgery: Outcomes, Volume and Resources, MOH Information Paper: 2006/17, Ministry of Health, Singapore.

Gauld, R. (ed.) (2005), *Comparative Health Policy in the Asia-Pacific*, Open University Press: Maidenhead, UK.

Gauld, R., Ikegami, N., Barr, M.D., Chiang, T.-L., Gould, D., and Kwon, S. (2006), Advanced Asia's Health Systems in Comparison, *Health Policy*, Vol. 79, pp. 325–36.

Holliday, I. (2003), Health Care, in I. Holliday and P. Wilding (eds.), *Welfare Capitalism in East Asia: Social Policy in the Tiger Economies*, Palgrave Macmillan: London.

Holliday, I. and Wilding, P. (eds.) (2003), *Welfare Capitalism in East Asia: Social Policy in the Tiger Economies*, Palgrave Macmillan: London.

HPB (Health Promotion Board) (2008), Website, www.hpb.gov.sg.

Institute of Medicine (2000), *To Err Is Human: Building a Safer Health System*, National Academy Press: Washington, DC.

JHC (Jurong HealthConnect) (2008), Website, www.juronghealthconnect.com.sg.

Lim, L.Y.C. (1989), Social Welfare, in K.S. Sandhu and P. Wheatley (eds.), *Management of Success: The Moulding of Modern Singapore*, Institute of Southeast Asian Studies: Singapore.

Lim, M.K. (2004a), Shifting the Burden of Health Care Finance: A Case Study of Public–Private Partnership in Singapore, *Health Policy*, Vol. 69, pp. 83–92.

Lim, M.K. (2004b), Quest for Quality Care and Patient Safety: The Case of Singapore, *Quality and Safety in Health Care*, Vol. 13, pp. 71–5.

Lim, M.K. (2005), Transparency of Hospital Bills, *Health Policy Monitor*, Vol. 5, No. 5, http://www.hpm.org/survey/sg/a5/3.

Lim, M.K., Sadarangani, P., Chan, H.L., and Heng, J.Y. (2005), Complementary and Alternative Medicine Use in Multiracial Singapore, *Complementary Therapies in Medicine*, Vol. 13, pp. 16–24.

MOH (Ministry of Health) (2008), Polyclinics Have Made Progress, www.moh.gov.sg/mohcorp/mediaforums.aspx?id=12420.

Nathan, D. (2003), In the End, It Was Not to Be: Laleh and Ladan Die after Landmark Surgery, *Straits Times*, July 9.

OECD (2009), *OECD Health at a Glance*, OECD: Paris.

Reisman, D. (2006), Payment for Health in Singapore, *International Journal of Social Economics*, Vol. 33, No. 2, pp. 132–59.

Robinson, J.C. (2005), Health Savings Accounts: The Ownership Society in Health Care, *New England Journal of Medicine*, Vol. 353, No. 12, pp. 1199–202.

WHO (World Health Organization) (2000), *The World Health Report 2000: Health Systems: Improving Performance*, WHO: Geneva.

WHO (2010), *World Health Statistics 2010*, WHO: Geneva.

10 European and Asian health care systems in comparative perspective

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Health care systems are among the most complex and comprehensive administrative and policy systems that there are. They are not to be comprehended by looking at any single datum or perspective. They are constantly developing. They are elusive and often misunderstood, that is, they may be mistaken for something they are not, or certain aspects may be overestimated or underestimated. Health care systems are needed, loved, and detested. There is, as a matter of fact, a great deal of misperceptions and misunderstandings when it comes to health care. The recent debate in the United States, to name just one illustrative example, has clouded the issue of health care policy and health care reform in greater mystery than it helped to unravel and reveal new insights to the actual facts.

In the comparative study below, we will see that for instance the United States would be among the top three world health care systems in terms of "socialism," or, in other words, absolute *public spending per capita for health care*. Only in Luxembourg and Norway does the government spend more on health care per person than in the United States (US$5,212, $4,006, and $3,315 respectively, at purchasing power parity [PPP]). The often cited case of the United Kingdom, in the American debate, would qualify to be only a moderate "socialist" health care system after all, as the UK government only spends US$2,444 PPP per capita on health care, compared with US$3,315 PPP spent by the American government. So, the health care system in the United States, as it is, is actually about 35 percent more "socialist" than that of the United Kingdom. In terms of percentage of gross domestic product (GDP), the USA leads the world in terms of total health spending, making it not the best health care system, but the most expensive health care system – both in relative terms (% of GDP) and in absolute terms (per capita expenditure, PPP).

Measuring and comparing health care systems

The best health care systems are the ones that need less money and, at the same time, cure more patients and prevent more illness and suffering. Health care outcomes are not too difficult to find and to measure; life expectancy and healthy life expectancy rates are easily available and comparable, and so are neonatal, infant, below-5, maternity, and adult mortality rates. The service delivery itself