

Trade in Western Australian

Health Industry Services:

Directions for Development

November 2004





WESTERN AUSTRALIAN
TECHNOLOGY & INDUSTRY ADVISORY COUNCIL

Trade in Western Australian Health Industry Services: Directions for Development

November 2004

Additional copies of this report can be obtained from our website: www.wa.gov.au/tiac

Foreword

Western Australia's health and education services and personnel are among the very best in the world. Indeed, the value of the export of education to the Western Australian economy now exceeds \$600 million annually. It is surprising that the health industry in Western Australia has not also developed a global export business similarly commensurate with the quality of the product.

The global trade in the provision of health services is now considerable. Factors such as rising disposable incomes, sophisticated diagnostic and treatment procedures, and ageing populations have stimulated business opportunities in the provision of health care services. While there are a few Western Australian health businesses competing successfully in the international market, they tend to be relatively small and specialised. Most companies remain focussed on the provision of health care solely within the State.

At present, there is no particular focus on industry organisation within Western Australia which could coordinate marketing and implementation, help facilitate companies interested in exporting their skills and services, and take advantage of opportunities as they develop. The private health care system in Western Australia is considerable and influential, and clearly has the capacity and ability to develop export businesses should they so wish. This would add substantially to the Western Australian 'knowledge hub' which the Western Australian Technology and Industry Advisory Council (TIAC) has so consistently promoted in recent years.

This discussion paper on the export of health services endeavours to:

- suggest a whole of government approach;
- promote the formation of an industry association to work closely with the State Government;
- encourage and promote collaboration among the key stakeholders;
- indicate action necessary to reduce and/or remove obstacles for trade in health services; and
- encourage health service providers and higher education institutions to work collaboratively in the provision of health education and training, as an important component of this trade.

Whilst it is acknowledged that, in many respects, the provision of public sector health care is stretched, there is considerable capacity within the private sector and in some parts of the public system that could be developed for this purpose. This needs to be supported and encouraged to provide a greater return for Western Australia and to further the development of the State as a major knowledge hub.

TIAC is grateful to ACIL Tasman, and especially to Mr John Roberts and Ms Pauline Gately for the quality of their work in the preparation of this report.

Professor Lance Twomey
Vice Chancellor, Curtin University
Chair of the Steering Committee

Contents

Foreword	i
Executive Summary	v
Opportunities for Trade in Health Services	v
The Challenge	v
Strategic Framework	v
1 Introduction	1
2 Health Services – A Global Perspective	3
2.1 Overview of Global Health Services	3
2.2 What do we know about trade in health services?	5
2.3 How Health Services are Traded	6
3 Western Australia’s Health Services Sector	10
3.1 The Health Services Sector in Western Australia	10
3.2 The Value of the Western Australian Health Industry Services Sector	13
3.3 Potential Benefits from Nurturing Trade in Health Industry Services	14
4 Opportunities for Trade in Health Industry Services	16
4.1 Existing Trade Opportunities	16
4.2 Emerging Opportunities	18
5 Influences on Health Services Trade	27
5.1 Specialisation and Comparative Advantage	28
5.2 Sound Business Models	30
6 Health, Education and Tourism	33
6.1 Education and Tourism – Successful Strategies	33
6.2 Health Tourism	34
6.3 Education and Health Industry Services Trade	35
7 Impediments to the Export of Health Industry Services	36
7.1 Cross Border Supply	36
7.2 Consumption Abroad	36
7.3 Commercial Presence	37
7.4 Movement of Natural Persons	38
8 Nurturing Trade in Health Industry Services	39
8.1 Critical Success Factors	39
8.2 Conclusion	43
9 Bibliography	45
Appendices	
A Global Health and International Health Trends	A.1
B Liberalisation of Trade in Services	B.1
C Highlights of Industry-specific Restrictions on Health Industry Services	C.1
D Steering Committee and Consultation Team	D.1
E Towards a Western Australian Knowledge Economy 1999-Present	E.1
F Western Australian Technology and Industry Advisory Council	F.1

Boxes, Figures and Tables

Box 1	Practi-Med and the Dubai Healthcare City	18
Box 2	Clinical Training and Education Centre	20
Box 3	Centre for International Health	20
Box 4	Evolution Fitness	22
Box 5	Telemedicine in the Kimberley	24
Box 6	e-Med – The International Centre for Mobile Health Care Solutions	25
Box 7	Bumrungrad Hospital	29
Box 8	The Lion’s Eye Institute	29
Box 9	Clinical Cell Culture	30
Box 10	Healthcare WorldWide Pty Ltd	31
Box 11	Raffles Medical Group	31
Box 12	Parkway Group	31
Box 13	Apollo Hospital Group	35
Figure 1	Modes of Trade in Health Services	7
Figure 2	Western Australia’s Services Sector – Industry Contributions to Total Factor Income	13
Table 1	Growth of Expenditure on Health, 1990-2001	4
Table 2	Health Services in BPM5 Categories and EBOPS Classifications	6
Table 3	Value of Exports of Health and Medical Services: Australia	14
Table 4	Imports of Other Private Services (1992-2002)	16
Table 5	Existing Trade Opportunities in Health Services – Asia	17
Table 6	Existing Trade Opportunities in Health Services – Middle East	18
Table 7	Plastic Surgery Procedures in Asia and the Middle East	19
Table 8	Determinants of Success and Failure in Telehealth	24
Table 9	Competitive Position of Western Australian Health Service Providers	27
Table 10	Regional Cost Comparisons of Some Medical Procedures (US\$)	28
Table C1	Summary of Industry-specific Commitments Scheduled by Asia/Pacific Trading Partners, by Industry, under GATS	C.1

Executive Summary

Opportunities for Trade in Health Services

Global health expenditure as a proportion of GDP has grown significantly over the last two decades. This surge in health spending is a function of several variables including:

- rising income;
- ageing populations;
- rapid growth in surgical procedures such as coronary bypasses and angioplasty procedures, as well as hip and knee replacements and plastic surgery; and
- growing adoption of new and sophisticated medical diagnostic technologies like CAT, MRI and PET Scanners.

All of these developments have contributed to growth in health services trade as countries position themselves to take advantage of emerging business opportunities arising from greater health spending.

In addition, many developing countries are also facing significant health challenges such as HIV/Aids, tuberculosis, eye diseases, nutritional and water-related diseases and women's health. Meeting these challenges also presents opportunities for increasing trade in health services.

Western Australia's health services capability together with proximity to Asia and the Middle East, gives local health service providers an edge in winning a share of the growth of health services trade. However, the international health sector is very competitive, with strong alliances between hospitals and medical facilities across Asia-Pacific, North America and Europe and the Middle East.

The Challenge

The challenge for Australian companies is to develop appropriate entry strategies to win market share in this competitive environment. There are some Western Australian companies and institutions that are successfully engaged in health services trade. However, many companies and institutions are still primarily focused on the domestic market.

In addition, the health services sector in Western Australia is diverse and fragmented. Without a centre of gravity, such as an industry organisation, that can coordinate marketing efforts and support companies and institutions, opportunities for trade are often missed. The challenge, therefore, is to provide a platform for health service providers to capitalise on emerging opportunities and build the reputation of Western Australia as a reliable and competitive supplier of health services.

Strategic Framework

An urgent priority is to raise the profile of Western Australia's health services sector and promote its capabilities both nationally and internationally. This requires a strategic approach, including:

Executive Summary

- adequate government resourcing to support and facilitate the State's health services trade effort;
- the formation of an industry organisation to work in conjunction with the State Government to initiate and develop strategies to raise the sector's profile;
- ongoing monitoring of and action to minimise and/or remove obstacles to trade in health services;
- mechanisms to identify and match opportunities for trade in health services with Western Australia's health services capability; and
- encouraging and promoting collaboration amongst key stakeholders in the sector.

Government Resourcing and Support

The State Government should play a key role in facilitating and encouraging trade in health services. This is entirely consistent with the Government's objective of broadening Western Australia's economic base (outlined in the Industry Policy Statement, *Building Future Prosperity*, released in January 2004).

Recommendations

1. Additional resources should be allocated to the Department of Industry and Resources (DoIR) in the 2005-2006 State Budget to support business development and trade in Western Australian health services.
2. The State Government should establish a Ministerial Advisory Forum (for a period of two years) on trade in health services and attaining benefit from the synergies between trade in health services, education and training and tourism.
3. In supporting the development of Western Australian health services trade, the State Government should adopt a whole of government approach by ensuring adequate interface between agencies within government. For example, DoIR should coordinate its efforts to foster health services trade with other State Government agencies such as TourismWA, the Department of Education and Training and the Department of Health, who may share common goals in promoting Western Australian services trade.
4. The Government of Western Australia should actively advocate for a relaxation of national medical visa requirements for inbound patients and supporting family and friends. Specific areas for consideration/examination include medical visa processing times and the appropriateness of health check requirements.

Formation of a Western Australian Industry Organisation

Western Australia's health services sector is fragmented and characterised by small and medium sized enterprises. Consequently, the industry lacks a focal point for providing strategic direction and initiating marketing and promotional activities to boost its profile.

Recommendations

5. As part of the State Government's drive to promote services trade generally, the Western Australian Government (through DoIR) should foster the establishment of a Western Australian Health Services Trade Organisation. This industry organisation would work in conjunction with DoIR and consult with other State Government agencies (e.g. TourismWA, the Department of Education and Training and the Department of Health) to enhance the sector's profile and provide a focal point for focussed marketing and promotional initiatives nationally and internationally.

Specifically, the industry organisation would contribute to:

- developing a business and marketing plan for trade in Western Australian health services;
- planning trade missions;
- hosting international delegations;
- strengthening and encouraging business and trade networks and increased collaboration amongst Western Australian health services organisations; and
- lobbying Federal Government for a review of medical visa conditions.

The Western Australian Health Services Industry Organisation and the Western Australian Government (through DoIR) in collaboration with other State Government agencies) should also work together to establish the information needs for successful health services trade and develop strategies and initiatives according to priorities.

6. In order to raise the sector's profile, the State Government (through DoIR) and in conjunction with the Western Australian Health Services Industry Organisation, should establish procedures for reviewing and updating *The Western Australian Health Industry Directory of Services and Products*.

Regular updates of the Directory (e.g. annually) would enable the State Government and the Industry Organisation to:

- maintain a comprehensive Western Australian Health Services Capability Statement; and
- monitor and match Western Australia's health services capability to emerging export opportunities.

Commitment to Exporting

Export success in any market critically depends on owners' and managers' commitment to exporting, along with their awareness and understanding of international business opportunities and practices. Although prospective exporters can access a myriad of information on international markets, much of the information available from State and Commonwealth agencies is not targeted at the health services sector.

Additionally, if public sector organisations (particularly the Department of Health) are to participate in export activities they must have a clear mandate to do so.

Although improving revenue generation through commercial activities is recommended in the Health Reform Committee's recently published report *A Healthy Future for Western Australians*¹, there still appears to be a perception within the Department of Health that it does not have a clear mandate to engage in international health ventures. As a result, although there is potential for successful trade in Western Australian public health services, institutional and statutory constraints appear to be limiting the Department of Health's ability to respond to opportunities.

Recommendation

7. The State Government should provide the Department of Health with a clear mandate to explore opportunities in the trade of public services without compromising the delivery of health services to Western Australians. In addition, the Department of Health should establish a procedural framework to engage in trade in public sector health services.

Identifying Emerging Export Opportunities

Even if health service providers are committed to exporting, they are, in many instances, not fully appraised of the potential value of emerging trade opportunities both nationally and internationally. Telehealth is one area which does not appear to be fully appreciated.

According to the Commission on Macroeconomics and Health², future prospects for telehealth and the integration of information technology with health care services looks promising. Specifically, areas where it sees potential for expansion of telehealth exports include: tele-assisted services related to home care for the elderly and rehabilitation services; professional education services and online health information services. UNCTAD³ estimates that the global market for online health information services was worth US\$21 billion in 2000 and places an estimate of almost US\$4 billion on the market for continuing professional education.

Recommendation

8. The State Government should commission a study to provide a systematic assessment of opportunities and barriers (including issues in various jurisdictions) to move forward in the area of telehealth.

Collaboration and Support

Lack of collaboration and support can lead to lost export opportunities when local firms and institutions do not have sufficient resources at hand to service market opportunities as they emerge. In many instances, this problem could be overcome if institutions were prepared to collaborate with other domestic organisations.

¹ Recommendation 81 of the Western Australian Department of Health's Reform Committee report, *A Healthy Future for Western Australians*, suggests that the "The Department of Health should pursue revenue raising initiatives, which will increase the State health system's per capita 'own-source' revenue to the national average by 2006/07. This will include setting revenue targets for Area Health Services."

² Commission on Macroeconomics and Health – Paper WG 4:5.

³ UNCTAD/WHO (1998).

Similarly, firms and organisations need access to networks and resources to successfully identify and capitalise on emerging export opportunities. Experience shows that this type of support is often provided through industry clusters. Encouraging Western Australian health services clusters would promote export activity by encouraging collaboration with other domestic organisation and institutions, and by facilitating contact with overseas organisations, branding, organising showcase events.

Recommendations

9. The State Government (through DoIR) in collaboration with the Western Australian Health Services Industry Organisation, should encourage the State's higher educational institutions and health service providers to explore opportunities for collaborating in the provision of health education and training and other health-related services.
10. The Western Australian Health Services Industry Organisation (in conjunction with both public and private sector organisations) encourage the development of Western Australian health services clusters.

1 Introduction

Health services⁴ are one of most rapidly growing sectors in the world economy (Chanda 2001⁵). The most recent estimates indicate that it is worth about US\$3-4 trillion per year in OECD countries (UNCTAD/WHO 1998). Global trade in health services was worth around US\$30 billion in 2002. Although considered to be relatively small by international standards (at less than 1 per cent of total services trade) health services trade represents a very significant and growing opportunity.

Trade in health services in the form of education and training, the movement of health professionals, foreign direct investment in health services, and telemedicine, has increased significantly in recent years. This upsurge can be attributed to the impact of globalisation on the economic well being of nations and individuals through:

- the decline in public sector expenditures and rise in private sector participation in health care in many countries;
- the liberalisation of related sectors such as insurance and telecommunications;
- increased mobility of consumers and health service providers due to declining travel costs and greater ease of travel;
- technological advances enabling the cross border delivery of many health services;
- differences in costs, availability and quality of health care across countries;
- the emergence of investment opportunities in the health care sector with the liberalisation of investment regulations; and
- the general increase in demand for health services arising from increasing (disposable) income levels and ageing populations (Chanda 2001).

The importance of health services to the economies of the Asian region and the potential impact that health-related threats could have on trade and security has been recognised by Asia-Pacific Economic Cooperation (APEC). It recently established a Health Task Force to enable it to address health matters more efficiently and effectively.

Western Australia is well placed to take advantage of emerging opportunities in the global health sector. Pursuit of these opportunities is entirely consistent with the State Government's industry policy⁶.

⁴ In this report, health services are broadly defined as:

- Health Services provided to patients/clients that may include diagnostic services and treatment interventions provided by doctors, nurses and allied health professionals through direct and/or distance modes of delivery.
- Health Education/Training provided to doctors, nurses, health care administrators and allied health professionals through direct and/or distance modes of delivery.
- Medical and Scientific equipment (goods).

⁵ Rupa Chanda : *Trade in Health Services*. Commission on Macroeconomics and Health: Working Paper No. WG4: 5.

⁶ *Industry Policy Statement*: Government of Western Australia, 2004.

Although the State's economy has grown faster than Australia's economy as a whole over the past decade, its heavy reliance on exports of minerals and energy makes it vulnerable to the volatility of world commodity markets. This has led to a call for a broadening the State's economic base by, for example, fostering growth in knowledge intensive manufactures and services. Increasing exports of education and health services are important considerations.

Export of education services is already on a strong footing, especially in the Asian region. In a similar way, there are many opportunities for Western Australian health services to tap into the rapidly growing global health services market, especially in Asia and the Middle East.

Recent free trade agreements with Singapore and Thailand and negotiations with China and possibly Malaysia, will enhance Western Australia's opportunities for services trade including health services in the Asian region.

The global health services sector is growing rapidly and increasingly presenting opportunities for trade. A number of Western Australian health services sector organisations are well placed to capitalise on these opportunities. This report examines how Western Australian organisations can best position themselves to take advantage of emerging opportunities and makes a number of recommendations in relation to the support required from the industry and Government to facilitate this trade.

2 Health Services – A Global Perspective

2.1 Overview of Global Health Services

Globally, health expenditure as a proportion of Gross Domestic Product (GDP) ballooned in the second half of the 20th century, experiencing an almost threefold increase from 3 per cent in the 1950s to 8.5 per cent by 2001⁷. The good news for health service providers everywhere is that this trend shows no sign of abating. In fact, over the last decade, annual growth in per capita health spending has outpaced GDP in most OECD countries by a significant margin (refer Table 1).

According to the OECD, key drivers of greater health spending include:

- rising incomes;
- demographic trends;
- epidemiological trends; and
- development and diffusion of new technologies and drugs.

The rapid growth of surgical medical procedures (such as coronary bypass and angioplasty surgery as well as knee and hip replacements) reported by the OECD over the last decade can be attributed, in part, to rising incomes and ageing populations throughout the developed world.

There is also a growing adoption of new and sophisticated medical diagnostic technologies like computerised tomography (CT) scanner, magnetic resonance imaging (MRI) and Positron Emission Tomography (PET) scanners in many OECD and some East Asian newly industrialised countries.

Asia Pacific Economic Cooperation (APEC) member economies are also keen to promote trade in health services. Several member countries (in particular Malaysia, Singapore and Thailand) have already implemented domestic policy programs to attract foreign patients and expand health services trade with the objective of creating an ‘Asian health and medical hub’.

For example, in October 2003, the Singapore Government launched SingaporeMedicine, a multi-agency initiative aimed at developing Singapore into one of Asia’s leading destinations for health care services. This multi-agency effort involves the Economic Development Board (EDB), Singapore Tourism Board (STB) and International Enterprise Singapore (SIE). Each agency performs a specific role. While the EDB promotes new investments and fosters the development of new health capabilities for SingaporeMedicine, the Tourism Board spearheads marketing efforts in relation to strengthening service delivery to foreign patients and developing international referral channels. Finally, SIE promotes the growth and expansion of Singapore health service providers into the Asian region.

The Singapore Government has also expended significant resources to develop a bio-technology and pharmaceutical industry, around the Biopolis⁸ research hub. The Biopolis hub is one of the initiatives driven by A*Star (Agency for Science, Technology and Research), a government entity involved in developing the biomedical industry through grants, education and training, commercialisation, and research.

⁷ Health at a Glance – OECD Indicators 2003.

⁸ The Economist, August 14, 2004, p.54: “*Biopolis covers almost 200,000m² and houses 5 government funded biomedical research institutes, large private research labs, and provides shared facilities for researchers.*”

Therefore, as well as providing facilitation and support for private firms, the Singaporean Government has become directly involved in the biomedical sector. Through A*Star and the EDB, it is estimated that the government has invested nearly S\$2 billion in advancing Singapore as a biomedical hub⁹.

A similar approach to industry development is evident in Malaysia, in particular with the government's Multimedia Super Corridor (MSC) initiative. The MSC is a 15km by 50km designated zone with attractive infrastructure and assistance packages for information and computing technology (ICT) firms. The MSC has seven flagship applications, or areas for development, including electronic government, smart cards, smart schools and telehealth. The telehealth initiative aims to “ensure seamless availability of health information and virtual health services, and transform the way health care services are delivered and accessed.” The government is looking to fund pilot programs in teleconsultation, patient information management and continuing education of both practitioners and the general population.

Thailand continues to actively promote itself as a premier destination for medical tourism. According to various press reports¹⁰, the country serviced 600,000 foreign patients in 2002, worth some A\$680 million and expects to earn a further A\$4 billion in foreign revenue from health and medical tourism over the next three years.

Like much of the OECD area, Asian populations are expected to live longer than ever before. They are also becoming increasingly affluent. Judging by experience in Europe, Australasia and America (refer Table 1), this should generate even stronger demand for quality health care and enhanced opportunities for Western Australian health services trade.

Table 1 Growth of Expenditure on Health, 1990-2001

	Real Annual per Capita Growth Rates, 1999-2001(%) ⁽¹⁾		Health Spending as Percentage of GDP ⁽²⁾		
	Health Spending	GDP	1990	2000	2001
Australia	3.8	2.4	7.8	8.9	--
Austria	2.6	1.8	7.1	7.7	7.7
Belgium	3.5	1.7	7.4	8.6	9.0
Canada	2.3	1.6	9.0	9.2	9.7
Czech Republic	4.1	0.6	5.0	7.1	7.3
Denmark	1.9	1.9	8.5	8.3	8.6
Finland	0.5	1.6	7.8	6.7	7.0
France	2.5	1.5	8.6	9.3	9.5
Germany	2.0	1.2	8.5	10.6	10.7
Greece	4.0	1.8	7.4	9.4	9.4
Hungary	2.1	2.6	7.1	6.7	6.8
Iceland	2.8	1.6	8.0	9.3	9.2
Ireland	6.7	6.2	6.1	6.4	6.5
Italy	1.9	1.4	8.0	8.2	8.4
Japan	3.8	1.1	5.9	7.6	--
Korea	7.4	5.2	4.8	5.9	--
Luxembourg	3.0	3.9	6.1	5.6	--
Mexico	4.9	1.4	4.5	5.6	6.6
Netherlands	3.1	2.1	8.0	8.6	8.9
New Zealand	3.0	1.5	6.9	8.0	8.1
Norway	3.5	2.8	7.7	7.7	8.3
Poland	5.0	3.3	5.3	6.0	6.3
Portugal	6.1	2.3	6.2	9.0	9.2
Slovak Republic	--	--	--	5.7	5.7
Spain	3.4	2.3	6.7	7.5	7.5
Sweden	2.1	1.5	8.2	8.4	8.7
Switzerland	2.4	0.2	8.5	10.7	10.9
United Kingdom	4.2	2.0	6.0	7.3	7.6
United States	3.2	1.7	11.9	13.1	13.9
OECD Average ⁽³⁾	3.4	2.1	7.3	8.1	8.4

Notes: (1) Australia, Japan, Korea, Luxembourg 1990-2000, Hungary 1992-2001, Germany 1992-2001.

(2) Hungary 1991, Germany 1992.

(3) OECD average excludes Slovak Republic and Turkey. The OECD average for 2001 includes data for 2000 for Australia, Korea, Japan and Luxembourg. Growth in health spending and GDP are calculated based on 1995 GDP constant prices. No recent estimates are available for Turkey.

Data Source: OECD Health Data 2003.

⁹ The Economist, August 14, 2004, p.54.

¹⁰ The Hong Kong General Chamber of Commerce: Bulletin March 2004, *Sun, Sand, Surf and...Stethoscopes?* and the Nation Newspaper. (Thailand).

2.2 What do we know about trade in health services?

Data Limitations

Surprisingly little is known about the value and magnitude of global trade in health services. Trade in services, including health services, is inherently more difficult to define and measure than trade in goods because there is no package passing through customs with information on contents, origin, destination and an invoice. With no reliable, internationally comparable data to go on, there is no way of verifying the true significance of this trade.

According to the World Health Organisation (WHO)¹¹, the main reason for the lack of data on trade in health services is the fact that this trade is still relatively small by global standards. Data limitations regarding trade in services have been identified as an issue in the current round of World Industry Organisation (WTO) trade negotiations. This has led to calls for more information on the economic impact of services trade in specific sectors, including health services. However, these data problems are unlikely to be solved in the near future.

The principal source of trade in services statistics is standard balance of payments (BoP) data. The IMF's Balance of Payments Manual (Fifth Edition BPM5) divides trade in services into four broad categories:

- Transport
- Travel
- Other Private Services
- Government Services

Since these categories are extremely broad it is difficult to evaluate the specifics of services trade. To overcome this problem the UN, EC, IMF, OECD and UNCTAD have jointly published a *Manual on Statistics of International Trade in Services* that provides guidelines for the publication of more compatible statistics with detailed sector disaggregation.

This new Extended Balance of Payments Services (EBOPS) classification (see Table 2) identifies 'health-related travel expenditure' and distinguishes 'health services' within the 'personal, cultural and recreational services' component of other private services. However, until the EBOPS classification is fully implemented, there is no foolproof way of estimating the value of cross-border flows of health services.

¹¹ WHO International Consultation on Assessment of GATS and Trade in Health Services: Research and Monitoring Priorities, January 2002.

Table 2 Health Services in BPM5 Categories and EBOPS Classifications

1. Transport	
2. Travel	• Health related expenditure (OECD, Eurostat, EBOPS)
3. Other Private Services	• Communication services • Construction services • Insurance services • Financial services • Computer and information services • Royalties and licence fees • Other business services • Personal, cultural and recreational services – health services (EBOPS)
4. Government Services	

Source: WHO International Consultation on Assessment of GATS and Trade in Health Services: Research and Monitoring Priorities, January 2002.

Estimate of Global Trade in Health Services

Combining the OECD health expenditure data outlined in Table 1 with published WTO data¹² corroborates the WHO (US\$30 billion) estimate of total health services trade mentioned earlier. On this basis, if health services account for even 2 per cent of other private services exports, then health-related exports under this heading alone are worth some US\$15 billion. Health related travel expenditure and insurance easily make up the remaining US\$15 billion.

2.3 How Health Services are Traded

The General Agreement on Trade in Services (GATS) which presides over trade in services (including health services) describes four modes of supply and two sets of basic rules for member countries¹³.

Modes of Supply

The four modes of cross-border delivery of services under GATS can be summarised as follows:

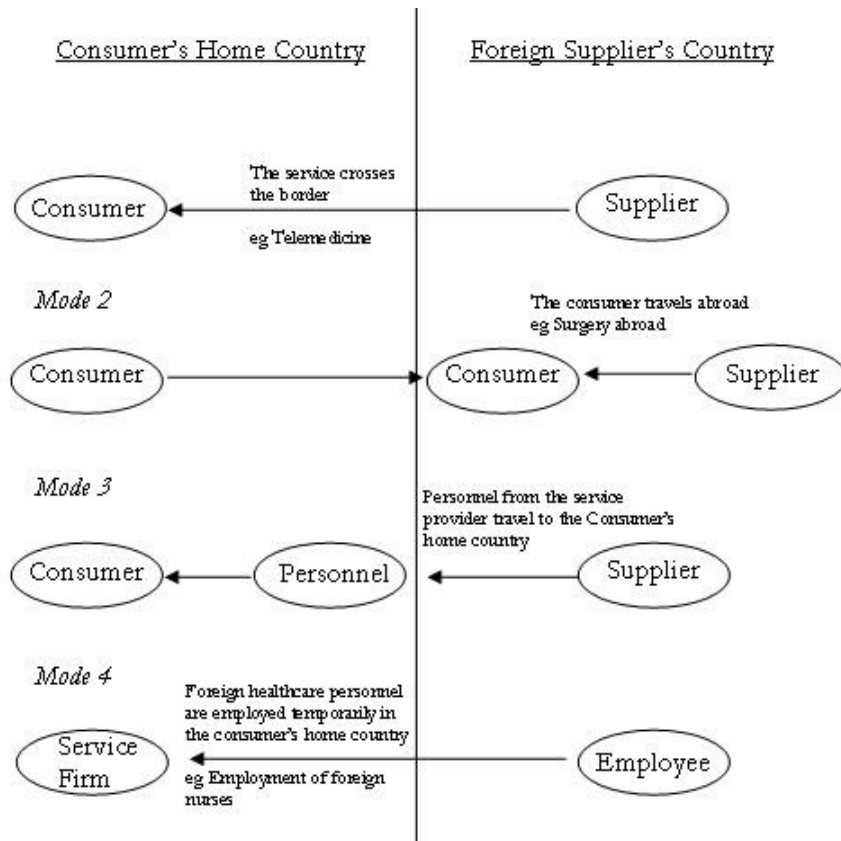
- services supplied from one country to another (e.g. telemedicine);
- consumers or firms making use of a service in another country (e.g. surgery abroad);
- a foreign company setting up subsidiaries or branches to provide services in another country (foreign-owned hospital); and
- individuals travelling from their own country to supply services in another country (short-term employment of foreign nurses).

¹² WTO International Trade Statistics 2003.

¹³ See Appendix B for a brief description of the WTO, GATS and the TRIPS Agreement.

The four modes are illustrated in Figure 1, which highlights schematically cross-border flows of health services between consumers and under each mode.

Figure 1 **Modes of Trade in Health Services**



Data source: Manual on Statistics of International Trade in Services; United Nations Dept of Economic and Social Affairs – Statistics Division: Statistics Papers Series M No. 86.

Mode 1: Cross-border Supply

Recent advances in information and communications technology have made cross border supply of health services (telehealth services including telepathology, teleradiology, telepsychiatry and teleophthamology) possible. Methods of delivery include direct clinical services such as diagnostics, consultations and laboratory testing. Distance delivery of on-going professional training and remote medical records management is also captured under Mode 1.

In 2000, the Centre for International Business Studies in Alberta, Canada, estimated global demand for telehealth services to be worth approximately US\$1.25 trillion¹⁴.

Mode 2: Consumption Abroad

Trade in health services under this mode includes both health services provided to foreign patients and educational services supplied to foreign students.

Examples of patients seeking health care in foreign countries include:

¹⁴ Commission on Macroeconomics and Health – Paper No. WG 4:5.

- those seeking specialised or surgical treatment that employs advanced technology, which may be unavailable domestically;
- those wishing to be treated in prestigious health institutions (e.g. the Mayo Clinic);
- those seeking convalescence care;
- those seeking benefit from natural endowments (e.g. hots springs and spas);
- those who travel for medical and dental out-patient treatment; and
- elderly persons who move to lower cost countries with better climates. (UNCTAD-WHO¹⁵ predicts that elderly patients from OECD countries will become a key driver of trade in health services subject to portability of health care entitlements.)

Factors such as well developed transportation, a common or similar language or culture, friendly doctor-patient relationships, readily available information on health facilities abroad, and established links with health institutions in the home country are important in attracting patients. Potential impediments to trade in health services under this mode of delivery (such as visa requirements) are discussed in more detail in Chapter 7.

Mode 3: Commercial Presence

Commercial presence involves foreign direct investment in health care facilities and infrastructure. Although this usually takes the form of joint ventures or local partnership arrangements, management contracts and licensing are becoming more popular.

Benefits that can accrue from the presence of foreign health care providers include upgrading hospital infrastructure and management and the realisation of developmental and social goals, especially in less developed countries.

Mode 4: Movement of Natural Persons

Along with consumption abroad, the temporary movement of personnel constitutes the majority of trade in health services. Examples of health services delivery under this mode include:

- on-site training and upgrading of professional skills;
- consultations with health authorities;
- nursing care; and
- provision of disaster relief and battlefield medical.

The scope for expanding trade in health services under Mode 4 ultimately hinges on the relaxation of regulations, which limit the movement of health professional such as:

- economic needs test requirements;
- discriminatory licensing;
- accreditation;
- recognition of foreign professional qualifications;
- nationality and residency requirements;
- immigration regulations; and
- discriminatory regulation of fees and expenses.

¹⁵ UNCTAD/WHO – International Trade in Health Services: A Development Perspective.

Other Basic Rules under the GATS

In addition to describing the modes of supply, GATS also sets out *General Obligations* that apply to all measures relating to trade in services. The most important obligation is the *Most-Favoured-Nation* (MFN) rule which requires WTO member countries to treat their trading partners equally.

Specific commitments on the other hand relate to industry sub-sectors. Highlights of *Specific Commitments* in health services for Asia Pacific member countries are contained in Appendix C. These schedules list the extent of market access in particular areas such as services provided by medical professionals, and any limitations on national treatment. In this way, the GATS offers flexibility to individual countries in terms of commitments on market access and national treatment.

For example, if a country allows foreign hospitals to operate in its domestic market, this is a ‘market access commitment’. Conversely, if a country limits the issue of licences for new hospitals, this is a ‘market access limitation’. Finally, if a country permits foreign hospitals to establish only one campus while domestic hospitals are allowed numerous campuses, this is an exception to the ‘national treatment principle’.

Assessing the Impact of Liberalisation of Trade in Health Services

The potential benefits of trade in health services, and in particular how countries are managing trade in health services to maximise positive economic and social consequences, remains an open question because of the lack of adequate data. While there is some concern that changes to the GATS currently under negotiation could reduce universal access to basic services such as health care, education, water and transport, in most countries not enough time has elapsed to fully assess the impact of GATS commitments in these areas.

3 Western Australia's Health Services Sector

3.1 The Health Services Sector in Western Australia

Broadly Based

The most recent description of the health services sector in Western Australia is the *Western Australian Health Industry Directory of Services and Products*, published in the mid-1990s by the Department of Commerce and Trade. Although dated, the Directory provides a description of the breadth of health services in Western Australia. Areas covered include:

- Aged Care
- Counselling Services
- Diagnostics/Pathology
- Disabilities/Physiotherapy/Rehabilitation
- Education and Training
- Health Facilities – planning/design and construction
- Health Services – planning and policy
- Medical/Clinical/Surgical Services
- Occupational Health and Safety
- Pathology
- Personnel/Staff Placement Services
- Pharmaceuticals
- Products and Equipment
- Psychiatric Care
- Referral Services for Medical/Clinical/Surgical Patients
- Regulatory/Standards/Accreditation
- Research

There is an urgent need to update this Directory on a regular basis (e.g. every two years) to take account of the changing face of the industry. For instance, the Directory in its current form does not include areas of demonstrated Western Australian expertise such as:

- Ophthalmology
- Child Health
- Sports Medicine
- Emergency Services
- Disaster Management
- Nursing
- Midwifery

Preparation of a Western Australian Health Services Capability Statement (available online) to market Western Australian Health Services, both nationally and internationally, and assist in attracting investors, partners and customers, is also crucial. The Directory and Capability Statement should be in a form that is easily accessible to facilitate regular updates.

Recommendation

The State Government (through DoIR) and in conjunction with the Western Australian Health Services Industry Organisation, should establish procedures for reviewing and updating The Western Australian Health Industry Directory of Services and Products.

Regular updates of the Directory (e.g. annually) would enable the State Government and the Industry Organisation to:

- maintain a comprehensive Western Australian Health Services Capability Statement; and
- monitor and match Western Australia's health services capability to emerging export opportunities.

Public and Private Sector Participation

Organisations listed in the existing Directory fall into two broad categories - the private sector and the public sector¹⁶.

The Private Sector

The private sector is dominated by a wide range of small to medium sized companies. The majority of these companies typically have a strong domestic focus and often lack the appetite and/or commercial experience and knowledge to enter the export market. Those companies that have enjoyed success usually cite entrepreneurial flair and strong business acumen along with a good product (typically aimed at a niche market) and timing as critical success factors.

Overall, the health services sector in Western Australia lacks a centre of gravity to coordinate marketing and other activities.

Recommendation

As part of the State Government's drive to promote services trade generally, the State Government (through DoIR) should foster the establishment of a Western Australian Health Services Industry Organisation. This industry organisation would work in conjunction with DoIR and consult with other State Government agencies (e.g. TourismWA, the Department of Education and Training and the Department of Health) to enhance the sector's profile and provide a focal point for focussed marketing and promotional initiatives nationally and internationally.

¹⁶ It is important to recognise that by categorising the Western Australian Health Services sector into a public and private component that some organisations and individuals straddle both categories.

This industry organisation would work in conjunction with DoIR and consult with other State Government agencies (e.g. TourismWA, the Department of Education and Training and the Department of Health) to enhance the sector's profile and provide a focal point for focussed marketing and promotional initiatives, nationally and internationally. The Industry Organisation would also help to provide strategic direction and foster business networks and collaboration.

The Public Sector

A significant proportion of Western Australia's health services' expertise and specialisation resides in the Department of Health and related health services (public sector hospitals). In fact, although the public sector grouping (which comprises the universities, research institutes and public/teaching hospitals) offers a number of products and services for which there is strong international demand, it is often unable or not inclined to take full advantage of international opportunities.

The recently published Reid Report¹⁷ on public health sector reform recommends improving revenue generation within the public sector health service as part of its overall reform strategy. Despite this, however, there is still a perception within the Department of Health that it does not have a clear mandate to engage in international health ventures.

There are a number of other factors that impinge on the appetite of public institutions to engage in overseas business. These range from risk aversion to lack of resources, knowledge and experience of overseas markets. Frequent staff changes in public sector organisations can also undermine the development of relationships and links with potential customers in Asia and elsewhere.

While there is considerable potential for successful trade in Western Australian public sector health services, institutional and statutory constraints (discussed above) appear to be limiting the Department's ability to respond to opportunities for health services trade. Consequently, there is a need for clearer Government direction and better processes within the Department of Health to effectively capitalise on overseas business opportunities.

Additionally, the universities, research institutes and public/teaching hospitals also face the problem that forays into overseas markets may result in a shift in health care resources from the public to the private sector, creating a perceived crowding out effect. This particularly relates to foreign patients coming to Western Australia for treatment.

Such concerns could be allayed by some form of Government awareness programme which explains that trade in health services need not compromise the delivery of health services to individual Western Australians. In fact, such trade could provide considerable benefits in the delivery of quality clinical care and free public health services by providing additional funding support.

¹⁷ The report on public sector health reform entitled, *A Healthy Future for Western Australians* was published in March 2004. Recommendation 81 suggests that *"The Department of Health should pursue revenue raising initiatives, which will increase the State health system's per capita 'own-source' revenue to the national average by 2006/07. This will include setting revenue targets for Area Health Services."*

Recommendation

The State Government should provide the Department of Health with a clear mandate to explore opportunities in the trade of public services without compromising the delivery of health services to Western Australians. In addition, the Department of Health should establish a procedural framework to engage in trade in public sector health services.

3.2 The Value of the Western Australian Health Industry Services Sector

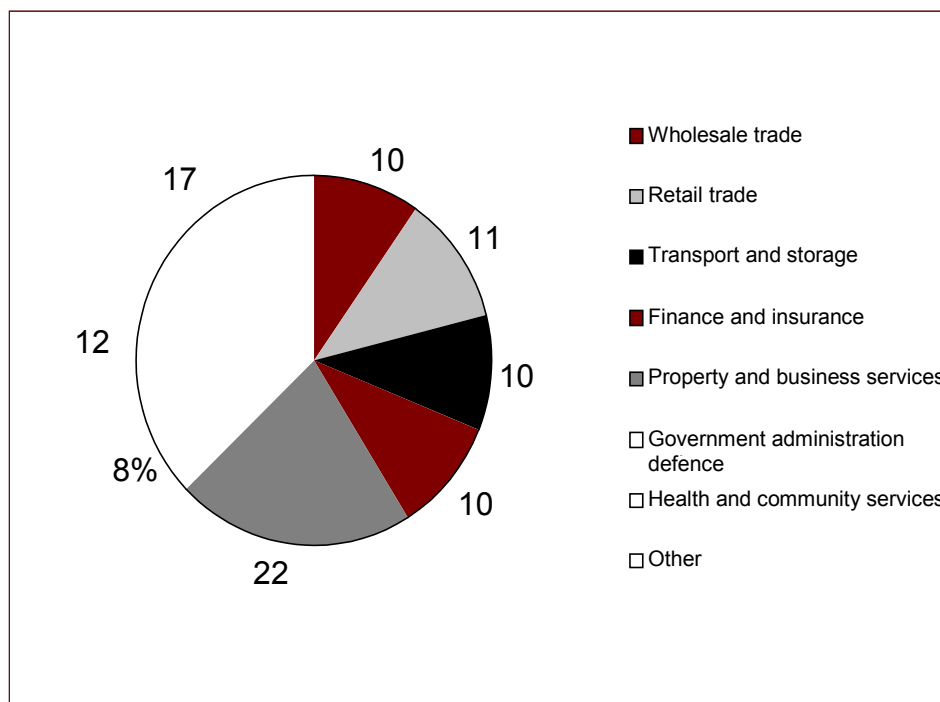
Contribution to the Western Australian Economy

The majority of health services are grouped under 'Health and Community Services' for statistical purposes. Figure 2 shows this group contributed about 12 per cent towards total factor income in 2001/02. Because of the way data is collected for the services sector as a whole, it was not possible to obtain a more detailed picture of the contribution of the sector to the Western Australian economy.

Share of Exports

Table 3 shows that the value of exports in health and medical services from Australia has fluctuated from \$4 million in the mid-1990s to a peak of \$15 million in 1998. It subsequently declined to \$7 million in 2002. Australia's total service exports account for around 22 per cent of total exports.

Figure 2 Western Australia's Services Sector – Industry Contributions to Total Factor Income



Data source: ABS Catalogue 5220, June 2003.

Table 3 Value of Exports of Health and Medical Services: Australia

Year	Exports (\$A million)
2002	7
2001	9
2000	n.p.
1999	13
1998	15
1997	9
1996	12
1995	4

Source: ABS Consultancy Service, np = not published.

Because the Australian Bureau of Statistics (ABS) compiles Australia's international trade in services statistics according to the International Monetary Fund's (IMF) Balance of Payments Manual classification, data on the export of services (in this case 'Health and Medical Services') is only provided at a national level. Hence, it is not possible to show the share of health services exports at the State level.

3.3 Potential Benefits from Nurturing Trade in Health Industry Services

The Western Australian economy is dominated by the mining and energy sector. In 2002/03 mining and energy accounted about 25 per cent of Gross State Product (GSP). This compares with about 9 per cent for manufacturing and 4 per cent for agriculture. In addition, a significant part of manufacturing is linked to the mining and energy sector, mainly in downstream processing.

The heavy reliance on the exports of minerals and energy and primary products means that the Western Australian economy is exposed to the volatility of the global commodities market. This has led to calls for greater diversification of the State's economic base towards more knowledge-based industries and was a key conclusion in the influential TIAC report, *Drivers and Shapers of Economic Development in Western Australia in the 21st Century*¹⁸.

The imperative to diversify the State's economic base was recognised in the State Government's recently released Industry Policy Statement (Government of Western Australia 2004), which states that one of the important goals for industry development is:

"To create a strong and diversified economic base that provides sustainable, high quality jobs and income growth for all Western Australians" (p.2).

TIAC's *'Drivers and Shapers'* Report identified health services and education as two knowledge-based sectors with considerable potential for expansion, especially into overseas markets¹⁹.

¹⁸ *Drivers and Shapers of Economic Development in Western Australia in the 21st Century* (TIAC 2000a) released in 2000.

¹⁹ The export of Western Australian education and training services was comprehensively addressed in the TIAC (2000b) report entitled, *Export of Western Australian Education and Training: Constraints and Opportunities*.

In addition to directly contributing the Western Australia's economic well-being through increased output and high-value knowledge intensive jobs, the export of health services has the potential to improve the State's medical knowledge and skills, technological capacity and health care standards through technology transfer and the experienced gained in servicing the export market. It may also lead to greater investment in the health sector in Western Australia.

4 Opportunities for Trade in Health Industry Services

4.1 Existing Trade Opportunities

Western Australia's geographical proximity and similar time zone provide a huge competitive advantage for organisations seeking to export goods and services to Asia. The region's rapid economic expansion throughout the 1980s and early 1990s has also created a swelling middle class with increasing demands for quality health care. Trade statistics confirm significant growth in the demand for services including health services (which are partly measured under the category of other private services) in the 10 years to 2002 (Table 4).

Direct flights from Western Australia to some Middle Eastern countries also confer a natural advantage in accessing markets in the Middle East. At present the lack of direct flights between Western Australia and China is impeding the development of health services trade. As the 2008 Olympic games in Beijing approach, direct flights between Perth and China may emerge.

Table 4 Imports of Other Private Services (1992-2002)

Country	2002 US\$ (bn)	10-Year Growth Rate (%)	5-Year Growth Rate (%)
India	21.8	229.4	77.5
Malaysia	16.2	124.2	-10.3
Singapore	20.3	117.9	10.3
Indonesia	15.6	102.3	-1.6
Philippines	5.1	83.3	-70.0
Hong Kong	24.2	67.6	4.0
Thailand	16.6	61.6	-3.3
Jordan	1.5	24.0	16.7

Source: Selected WTO International Trade Statistics 2003/IMF balance of Payments Data.

Austrade intelligence²⁰ outlined in Table 5 and Table 6 provides a snapshot of some of the many international initiatives underway in the provision of health services in Asia and the Middle East. The value of this information is limited by the fact that the Austrade's website is not frequently updated, and is not tailored to match Western Australia's health services capability. Without a vehicle to articulate the industry's capabilities and a mechanism to systematically canvas and match current and future needs against its capabilities, opportunities for trade in Western Australian health services are likely to be overlooked.

China, for example, is in the midst of a health care reform. According to recent reports²¹, the Health Ministry plans to allow the private sector to own and operate second-tier urban hospitals whilst retaining control of the main hospitals. If this policy initiative moves ahead, this could involve the privatisation of some 60 per cent of urban hospitals. In Indonesia, although foreign personnel in hospitals are limited to consulting roles, hospital management is open to foreign companies. Indonesia is also a substantial net importer of health care services, especially medical equipment, medical supplies and pharmaceutical ingredients.

²⁰ Austrade website www.austrade.gov.au as at 30 July 2004.

²¹ The Economist August 21 2004 : Special Report: "China's Health Care", p.20.

In the Middle East, Dubai and Jordan have been investing heavily in health services. The development of the Dubai Healthcare City (see Box 1) is testimony of the huge resources and collaborative effort currently being deployed in health services internationally. Healthcare City alone presents a vast array of opportunities for Western Australia health service providers. Likewise, Jordan has been investing heavily in upgrading and modernising its public hospitals and medical schools, and is open to foreign collaboration in the provision of education and training and general health services provision.

In order to take full advantage of both existing and emerging opportunities for trade, Western Australian health service providers need to collaborate and form strategic alliances (both nationally and internationally) to create the critical mass necessary to successfully market their services in highly competitive markets in Asia and the Middle East. This topic is explored in more detail in Chapter 5.

Table 5 Existing Trade Opportunities in Health Services – Asia

Country	Services/Products Demanded
China	biotechnology medical devices training and specialised medical education and accreditation management programs
Hong Kong	hi-tech laser equipment advanced operation theatre equipment ward equipment long-term training
India	medical electronics patient monitoring equipment diagnostic kits joint venture/investment private hospital diagnostic centres patient care management telemedicine nursing training hospital waste management system Health care service accreditation
Indonesia	private hospital development and management alliances with strategic specialist providers coronary care eye and ear institutes health insurance schemes hospital staff training – paramedic, administrative medical and hospital equipment Health care treatment in Australia
Malaysia	planning, design and management of specialised health care facilities training and specialised medical education management programs and IT medical equipment tele-medicine and digitalised imaging systems aged care planning, design and management rehabilitation facilities socio-geriatricians and psycho-geriatricians
Philippines	pharmaceutical products including vitamins antibiotics, and organic and natural drugs medical equipment and supplies professional management and project development for hospitals hospital equipment and fit-outs
Singapore	skilled manpower training in hospital management, nursing hospital equipment aged care products and services innovative pharmaceutical/medicinal products
Thailand	modern health and dietary supplements

Source: Austrade Information 30 July 2004.

Table 6 Existing Trade Opportunities in Health Services – Middle East

Country	Services/Products Demanded
Jordan	medical and surgical equipment hospital fittings education and training consultancy services
UAE	18 new hospitals with 3,816 beds by 2005 medical equipment health care management and consultancy

Source: Austrade Information 30 July 2004.

Box 1 Practi-Med and the Dubai Healthcare City

Harvard Medical International (HMI) is delivering medical education internationally through Practi-Med. This forum, created in conjunction with the New England Journal of Medicine, brings together health care leaders from around the globe to educate physicians and allied health care professionals to develop local solutions to common global health care challenges and disease burdens. Practi-Med runs medical education programs in China, India, Japan and the United Arab Emirates.

HMI and the Dubai Development and Investment Authority (DDIA) have also entered into an agreement to support the development of the Dubai Healthcare City (DHCC). The Dubai Healthcare City is an ambitious project, where internationally respected institutions in health care delivery, education, services, and research and development have been invited to collocate to take advantage of the synergies brought about by physical proximity, interconnectivity, and professional collaboration. The world-renowned Mayo Clinic is amongst these institutions.

Harvard Medical International will drive the establishment within DHCC of educational and research programs of Harvard Medical School and selected schools and hospitals associated with HMI. A postgraduate medical school focusing upon training of specialists in clinical fields will be developed along with a regional Centre for Continuing Medical Education (CCME) for practicing physicians. Additionally, a later developmental phase of DHCC will include the establishment of schools of nursing and allied health professions.

4.2 Emerging Opportunities

Emerging opportunities for trade in Western Australian health services include:

- Health and Wellness
- Plastic Surgery
- Health-related Educational Services
- Aged Care and Home-based Health Care Services
- Rehabilitation
- Sports Medicine
- Child Health
- Telehealth
- Health Management and Information Systems
- Emergency, Disaster and Risk Management Services

Health and Wellness

Health is now widely accepted as an important prerequisite for total well-being. However, according to Professor Wolfgang Nahrstedt, President of the European Leisure and Recreation Association, *“Health care will be the new basic innovation for the next major business cycle - after the technology age will come the health age... Wellness as opposed to health has become the goal.”*²² Indeed, the Wellness industry, which encompasses beauty, fitness, alternative medicine and psychological well-being, is expanding rapidly throughout the Asia Pacific region. Thailand and Indonesia already boast some of the world’s finest spa resorts offering a blend of traditional Asian and European treatments. Western Australia is currently experiencing a tourism related boom in rural retreats; mainly in the southwest of the State in localities in and around Margaret River and Denmark.

Plastic Surgery (reconstructive and cosmetic)

Plastic surgery is another area of rapid development. Ageing populations in the Western World and an expanding middle class across the Asia Pacific region, have culminated in an explosion in the demand for both non-invasive and cosmetic surgical procedures.

Table 7 Plastic Surgery Procedures in Asia and the Middle East

Country	Number of Procedures (2002)
USA	90,992
Mexico	52,956
Brazil	47,957
Japan	42,842
Spain	40,164
Australia	13,305
Taiwan	10,048
South Korea	9,560
Hong Kong	5,096
United Kingdom	4,668
India	2,259
Jordan	1,620
Singapore	1092
UAE	783

Note: Figures are extrapolated from surgeon survey responses.

Data Source: International Society of Aesthetic Plastic Surgery.

Table 7, which outlines data compiled from surveys conducted by the International Society of Aesthetic Plastic Surgery²³, shows Japan far ahead of other Asian countries in terms of the number of plastic surgery procedures performed in 2002. Interestingly, the surveys show more plastic surgery procedures performed in South Korea, Taiwan and Hong Kong than the UK. Judging by the surveys, the market for plastic surgery in Asia and the Middle East looks promising.

²² Clark, A. J. & Mackevicius, A. (2000). Australian Spas & Retreats. Hong Kong: Periplus Editions (HK) Ltd.

²³ The data contained in Table 7 does not distinguish between reconstructive and cosmetic plastic surgery.

Trade in Health-related Educational Services

Trade in health-related educational services is becoming an increasingly important component of health services trade. This trade is conveyed through the movement of professionals and students, consumption abroad, commercial presence and through electronic means. Australia is already at the forefront of this trend through its establishment of joint ventures with foreign medical universities and institutions. Growth of telemedicine and deeper IT penetration in health services suggest that there is plenty of scope for future expansion.

Western Australia already boasts outstanding health-related educational facilities and services. The facilities and services offered by the Clinical Training and Education Centre (CTEC) and Curtin University's Centre for International Health are impressive by any standards.

Box 2 Clinical Training and Education Centre

The Clinical Training and Education Centre (CTEC) is Australia's premier and most established medical and surgical skills training centre. The centre is operated as an unincorporated joint venture of UWA, Health Department of Western Australia, Royal Australasian College of Surgeons, The Royal College of Surgeons of England, and The Hill Surgical Foundation. In the four years since its establishment, the centre has provided training courses for some 12,000 surgeons, physicians, nurses and other health professionals.

CTEC integrates a surgical skills training laboratory and anaesthetic simulation centre within the one venue. Course participants have the opportunity to practice new complicated techniques on computer-based simulators, mechanical models or cadaveric material where appropriate. The centre contains Australia's largest range and number of sophisticated medical training equipment including computerised simulation models, high fidelity simulation manikins and extensive audiovisual and videoconferencing facilities

The majority of participants in past courses have come from within Australia, but with similar centres in Victoria and Queensland, CTEC is looking to offshore clients in the Asia Pacific, Middle East and South Africa. It sees itself as having a geographical and quality advantage over Eastern States centres in these markets.

Box 3 Centre for International Health

The Centre for International Health (CIH) at Curtin University provides post-graduate courses in international health to around 200 full fee-paying students. The centre provides courses both in person and via distance education to students around Australia and internationally. Many students are currently working on overseas projects in Africa, the Middle-East and Asian regions.

Having established the teaching arm, CIH is now keen to develop its consultancy arm. To date CIH consultancy work has been in the field of research and training, such as running short courses for physicians in China and the development of collaborative teaching activities with Bonn University and King's College London.

CIH staff have experience working with international agencies such as the World Health Organisation, World Bank, the UN and AusAID to develop disease control and population health programs in developing countries. This experience allows them to tailor courses to areas of demand within the health sector, most recently the monitoring and evaluation of HIV/AIDS, with courses to commence in 2005.

Aged Care and Home Based Health Care Services

Given demographic trends throughout the developed world and social/cultural and attitudinal changes, the demand for aged care facilities and home based health care (particularly assisted living for the elderly and disabled and those with chronic health conditions) is also likely to rise significantly in the future. This is already apparent in China where the one-child policy introduced in 1979 is effectively constraining the ability of children to look after their aged parents. Japan's rapidly ageing population is also placing pressure on traditional family values in relation to aged care.

Western Australia has considerable experience in the delivery of home-based health care. For example, Silver Chain Hospice Care Service is one of the largest community-based palliative care services in Western Australia, offering specialised skills in maximising quality of life for people who are terminally ill. Interdisciplinary teams with medical and nursing expertise deliver palliative care in the familiar environment of a patient's own home with bereavement support to families. Spinal and intra-ventricular analgesia and IV therapy procedures usually associated with hospital care can be performed at home. Expert knowledge in symptom management is therefore something that can be provided in the community.

Other home care services are provided as well through other specialty teams to patients released from hospital for acute care management at home, care to individuals with chronic illnesses requiring ongoing support and supportive care to elderly patients who may require monitoring for management of co-morbidities and daily living activities.

The home-based health care teams are affiliated with university research centres which provide state-of-the-art evidence to enhance quality of care and ensure best practice is maintained.

Rehabilitation

In line with emerging opportunities in the provision of aged care, the demand for rehabilitation services for both the elderly and those with chronic health conditions is also expanding. Similarly, rising demand for sports injury rehabilitation reflects the general increase in fitness awareness and participation that has occurred over the last 20 years.

Sports Medicine

Sports Medicine is no longer just the domain of a few specialists. Apparently, more sports medicine articles are finding their way into the general medical press, and even the lay press is becoming increasingly fascinated by sports injuries. For example, the July 2004 edition of *Medical Journal of Australia*, included an article reviewing the rates of spinal injuries in rugby union and calling for greater injury surveillance. Similarly, in the *British Medical Journal*, articles are appearing on subjects such as the success of steroids injections in back pain, avulsion injuries of the ischial tuberosity in adolescents and human growth hormone. As the interest in sports medicine (prevention and cure) continues to grow in line with the health and wellness boom, Western Australian sports physicians, researchers and technicians should experience greater international recognition.

As the sporting focus in China builds as the country increasingly turns its attention towards the 2008 Beijing Olympics, a broad cross section of Australian companies (from design and architecture firms to fitness training companies) are taking advantage of the flow on effects from Australia's Olympic success. The experience of Evolution Fitness (outlined below) is one such success story.

Box 4 Evolution Fitness

Evolution Fitness – an ANZAC (Australian, New Zealand and Chinese) owned and managed joint-venture fitness centre was established in mid-2001. At 2,300 square metres, it was one of the first large scale fitness centres located in the heart of Beijing's CBD area. The centre features a heated 25m indoor pool, rows of cardio machines, an extensive free weights area, a juice bar / coffee shop, sports therapy, sauna, steam and spa, a spinning studio, personal instruction, a boxing circuit and over 50 free group exercise classes per week. The club has 1800 members and employs 40 staff.

Evolution's success has stemmed from its preparedness to lead rather than follow. It was the first joint venture centre, and the first large-scale independent centre in the CBD area. It has been a leader in recruiting non-Chinese fitness instructors from Australia to offer personal training and to lead fitness classes and train Chinese staff.

Evolution Fitness has also invested back into the industry, working with groups such as the China Aerobics Association to help grow the industry and provide high quality training to new instructors across the country. It also sponsors community events such as film festivals, charity fundraisers, sports teams, and triathlon events.

The company opened its second facility in Beijing's CBD in late April 2004. The new 5-level centre will be slightly larger at 3,000 square metres. More new ventures are likely as China's appetite for fitness training continues to grow.

Source: <http://www.austcham.org>.

Child Health

Child Health represents an area of considerable opportunity. In the last three years, the Department of Child and Adolescent Health and Development (CAH) within the WHO has taken centre stage globally in advocating stronger child health epidemiology. CAH, together with the Centre for International Child Health (CICH), is currently reviewing the main conditions that affect the health and development of children such as:

- growth and nutrition;
- conditions resulting from pollution;
- parasites;
- blood disorders;
- infectious diseases;
- sensory diseases;
- neurological diseases;
- congenital conditions;
- substance abuse; and
- oral health.

Through the Telethon Institute of Child Health Research, Western Australia is at the cutting edge of research into a range of childhood illnesses. Research highlights outlined in the Institute's 2003 Annual Report²⁴ include:

- developing a new test that detects the loss of tumour suppressor genes in cancer cells. This paves the way for more targeted and effective treatment;
- developing a mouse to study genes in blood vessels. This research will eventually help to clarify the role of specific genes in tumour angiogenesis and the development of new treatment for solid tumours;
- discovering that asthma begins in utero;
- identifying the cell responsible for chronic airways inflammation in asthma; and
- discovering the reason why children with asthma and allergic rhinitis are more likely to develop ear infections and sinusitis.

Telehealth

According to the Commission on Macroeconomics and Health²⁵, future prospects for telehealth and the integration of information technology with health care services looks promising. Specifically, areas where it sees potential for expansion of telehealth exports include: tele-assisted services related to home care for the elderly and rehabilitation services; professional education services and online health information services. UNCTAD²⁶ estimates that the US homecare is the fastest growing segment of the country's health care industry. It also estimates that the global market for online health information services was worth US\$21 billion in 2000 and places an estimate of almost US\$4 billion on the market for continuing professional education.

However, despite these vast telehealth opportunities, the practicalities associated with implementing programs can be challenging. A profile of commonly cited determinants of success and failure in telehealth drawn from papers presented at the (2001-2003) international conferences on 'Successes and Failures in Telehealth'²⁷, show a myriad of issues surrounding the implementation and operation of telehealth programs (see Table 8).

²⁴ Telethon Institute for Child Health Research *Putting Children First* Annual Report 2003.

²⁵ Commission on Macroeconomics and Health- Paper WG 4:5.

²⁶ UNCTAD/WHO (1998).

²⁷ International Conferences: Successes and Failures in Telehealth. The Centre for Online Health (University of Queensland) has had a leading role in establishing and coordinating an internationally recognised event for everybody interested in telemedicine, telehealth and e-Health. The SFT annual conference series provides a unique forum which explores both successes and failures in telehealth.

Table 8 **Determinants of Success and Failure in Telehealth**

Determinant	Comments
Reliability of equipment, software, communications; adequacy of technical support and reliability.	The reliability of telehealth components will influence the degree of confidence in the technology and the ability to integrate telehealth with local practice patterns.
National or regional political, economic and budgetary issues.	A relatively stable, supportive environment is needed if telehealth is to thrive.
Perceived need for the telehealth service.	Has an adequate business plan been prepared? Is there adequate publicity? Is the alternative approach sufficiently effective?
Involvement of stakeholders in planning and ongoing liaison; health professionals' attitudes to training, changes in responsibilities, autonomy.	Involvement is necessary to encourage a sense of ownership and participation, acceptance of benefits and to make appropriate modifications to the telehealth programme.
Stability of management structures; turnover of personnel.	Continuity and consistency in personnel and other management is important.
Cooperation and competition between organisations involved in networks.	

Source: Journal of Telemedicine and Telecare 2003; 9(Supplement 2): S2:22-24.

Notwithstanding all of these challenges, research into specialist telemedicine programs employed in the Kimberley region of Western Australia show noteworthy success in terms of shorter healing times and a lower cost of treatment than the control group (see case study below).

Box 5 **Telemedicine in the Kimberley**²⁸

A recent study funded by the Telehealth Development Unit of the Western Australian Health Department has shown a potentially successful application of telemedicine in the treatment of chronic leg ulcers. These are a relatively serious and common problem in the Kimberley, predominantly amongst the Aboriginal population due to the high incidence of diabetes.

The study found significant cost savings and medical advantages where, in addition to treatment by local physicians, electronic images of wound images were transmitted to specialists in Perth for analysis and comment. The patient group whose wounds were transmitted to Perth had fewer amputations and fatalities, shorter healing times, and a lower cost of treatment than the control group.

The researchers commented that the interaction through telemedicine of the Perth-based Consultant with the Kimberley practitioners helped to transfer skills and increase the quality of local knowledge.

A key factor in the success of the system was information technology (IT) support for the health clinicians. The trial required the installation of the Wound Imaging System on computer systems, the storage and transmission of large amounts of information in the form of wound images, and the encryption of communications to protect patient confidentiality. Without appropriate IT support, the health clinicians lacked the technological know-how to make the most of the telemedicine paradigm.

²⁸ Source: Santamaria N, Carville K, Ellis I & Prentice J. *The effectiveness of digital imaging and remote expert wound consultation on healing rates in chronic lower leg ulcers in the Kimberley region of Western Australia*. Primary Intention 2004; 12(2): 62-64,66-68, 70.

E-Med, the International Centre for Mobile Health Care Solutions, which is highlighted as a case below, shows how Western Australian health service providers, research institutes and universities under the stewardship of the State Government are collaborating to build a mobile health facility to service remote areas of Western Australia. E-Med will capitalise on the growing trend towards use of electronic and portable diagnostic aids and deliver substantial economic and social benefits to the Western Australian community.

Box 6 e-Med – The International Centre for Mobile Health Care Solutions

The incidence of preventable disease is accelerating globally (and in Australia) at a much greater rate than qualified personnel are being trained in diagnosis and treatment. There is a huge need for mass screening and diagnostic technology that can be operated remotely to dramatically improve clinical care outcomes.

e-Med – The International Centre for Mobile Health Care Solutions, seeks to build a strong mobile health care facility in Western Australia. The Centre will build affordable next generation medical diagnostic technology including home care solutions, education and training programs, and will export clinical and disease management services from Australia to the Asia Pacific Region and the rest of the world. The Centre will advocate and promote remote or mobile diagnostic services to be accepted as part of the mainstream health care delivery.

With the support of the Western Australian Government the e-Med network will bring together seven Western Australian partners including leading universities and independent medical research institutes, and several Australian and international organisations with expertise in the development of telemedicine technologies.

In providing new portable equipment that will allow medical testing and diagnosis of a broad spectrum of diseases and disorders in situ and without unnecessary patient transfers, *e-Med* aims to improve the speed and cost of delivery of health care to those living in remote, rural and regional locations.

Since the majority of the world's population are still beyond the reach of conventional health care infrastructure, growth in the use of telehealth and telemedicine is likely to accelerate in the future. At present, Western Australia has no systematic method of assessing the opportunities and barriers to trade in this area. As part of its initiative to move forward in the area of telehealth, it is recommended that the State Government commission a study to assess global opportunities and impediments to trade in telehealth.

Recommendation

The State Government should commission a study to provide a systematic assessment of opportunities and barriers (including issues in various jurisdictions) to move forward in the area of telehealth

Health Management and Information Systems

Western Australia's Department of Health has considerable experience in data collection with major health data collections, data linkage between health collections and epidemiology systems.

The use of these systems to manage ambulance diversion, hospital beds and potentially syndromic surveillance are all potential emerging opportunities for consulting services.

Emergency, Disaster and Risk Management Services

Given increased security threats, including the recent bombings in Madrid, Bali and Russia, and continuing potential for natural disasters throughout the developed and developing world, the demand for disaster planning and risk management services is also likely to rise significantly in the future. Similarly, there is a rising demand for disaster medical response, particularly in specialised areas including burns management, urban search and rescue, and response to chemical, biological or radiological attack.

5 Influences on Health Services Trade

Trade in health services is driven by a wide range of factors related to international and domestic market conditions, and to prevailing economic and political environments²⁹. The competitive position of a country as a provider of health services typically depends on factors such as: the cost structure of individual organisations; the availability and skill of human resources; the extent of service differentiation; geographical proximity to target markets; cultural and linguistic affinities as well as supportive macro economic and industry policies are also natural conduits for trade.

As Table 9 shows, the Western Australian Government and industry can facilitate trade in health services by providing ample infrastructure, education and training, and promotional support. However, it has little or no influence on macro economic policy, the cost structure of individual organisations and the extent of service differentiation offered by health service providers.

Table 9 Competitive Position of Western Australian Health Service Providers

Competitive factor	State Government's ability to influence Yes/No	Means by which State Government can assist	Industry's ability to influence Yes/No	Means by which industry can assist
Cost structure of individual firms	No		Yes	Internal control
Availability and skill of human resources	Yes	Education and training	Yes	Training
Extent of service differentiation	Yes	Education and training	Yes	Training
Availability of technology and health facilities	Yes	Infrastructure provision	Yes	Infrastructure provision
Geographical proximity	No		No	
Cultural and linguistic affinities	Yes	Education and training	Yes	Training
Natural endowments	No		No	
Ability to market comparative advantage	Yes	Support and resourcing	Yes	Resourcing
Macro economic policy	No		No	
Access to finance	Yes	Only in the public sector	Yes	Through collaboration
Industry policy and promotion	Yes	Support and resourcing	Yes	Through lobbying
Openness of markets	No		No	

Data source: Commission on Macroeconomics and Health- Working Paper WG 4:5 and ACIL Tasman.

²⁹ See Appendix 9A for a more detailed discussion of global health and international health trends.

5.1 Specialisation and Comparative Advantage

In many respects, health service providers are no different from any other potential exporter in that export success ultimately depends on their ability to identify areas of comparative advantage in satisfying international demand. Western Australian hospitals, for instance, would struggle to compete on cost grounds alone (in relation to Mode 2 trade - consumption abroad) against speciality hospitals, such as the Bumrungrad Hospital in Bangkok. Figures outlined in Table 10 in the case of Malaysia, Singapore, Thailand and Hong Kong represent the total cost of medical procedures including doctors' fees, supplies and hospitalisation, whereas data for Western Australia refers to surgical fees only. Fees related to theatre use, bed stay in hospital and auxiliary x-ray tests and other special review by doctors such as anaesthetists and general physicians are therefore not included. If these fees were included, the total cost of these procedures carried out in Western Australia would likely exceed comparative Asian costs by a significant margin. Consequently, West Australian hospitals need to play on their strengths including enhanced surgical skills, lower risk and quality and depth of service in attracting foreign patients.

Indeed, in areas of high skill and specialisation, such as medical education, training and accreditation for foreign students, Australian establishments are renowned throughout the Asia Pacific region.

Table 10 **Regional Cost Comparisons of Some Medical Procedures (US\$)**

US\$	Malaysia	Singapore	Thailand	Hong Kong	Western Australia (surgical fees only)
<u>Preventive</u> Body check (female)	\$302	\$357	\$294	\$200-640	\$455 (basic assessment)
<u>Cosmetic</u> Double eyelid	\$530-660	n/a	\$1300	\$900-1200	\$2093
<u>Ophthalmology</u> Cataract surgery	\$710-1300	\$1011	\$900	\$300-5400	\$1867*
<u>Orthopaedic</u> Hip replacement	\$3900-5300	\$8900	n/a	\$4700-8000	\$1890
<u>Cardio-vascular</u> Open heart surgery	\$6580-9200	\$9500	\$7700	\$4000-7700	\$2786

Note: Figures refer to doctors' fees, supplies and hospitalisation in the case of Malaysia, Singapore Thailand and Hong Kong. Data for Western Australia refers to surgical fees only. Fees related to theatre use, bed stay in hospital and auxiliary x-ray tests and other special review by doctors such as anaesthetists and general physicians are not included. All Western Australian fees have been converted to Us dollar's using an A\$ exchange rate of 0.7 to one US\$.

Data source: Hong Kong Chamber of Commerce (March 2004 Bulletin), association of Private Hospitals Malaysia, SingaporeMedicine; Press reports, Bangkok Bumrungrad Hospital, List of Medical Services and Fees (Australian Medical Association) 1 November 2003.

Box 7 Bumrungrad Hospital

Bumrungrad Hospital in Bangkok is the largest private hospital in South East Asia, and a public company traded on the Stock Exchange of Thailand. It treats around 300,000 international patients every year out of a total of 850,000 with an increasing number from Australia following press coverage in 2003. The majority of Bumrungrad's Australian business is booked through preferred travel agencies.

The hospital sees price, quality and accessibility as the drivers of demand. They claim to offer unlimited accessibility at moderate cost with international standards of quality. This attracts patients discouraged from treatment in their home country by expensive or inaccessible care.

The Tourism Authority of Thailand has identified medical tourism as a market for development. Thai hospitals are able to offer surgical procedures for less than half the price of the same operation in Australia, and five to ten times cheaper than Europe. In addition to its price advantage, Bumrungrad makes a point to potential customers of its accreditation against US and Canadian standards, the first hospital in Asia to do so.

Organisations which have pioneered medical innovations such as The Lion's Eye Institute and Clinical Cell Culture (C3) and those which provide other specialised services have also typically enjoyed export success.

Box 8 The Lion's Eye Institute

The Lion's Eye Institute (LEI) is recognised as one of the world's pre-eminent eye research centres, combining research with clinical interactions and is dedicated to the investigation, prevention and cure of blinding eye diseases.

The Institute was established in 1983 to further the work of Professor Ian Constable and his team at the University of Western Australia. LEI works from a purpose-built facility within the QEII Medical Complex, and employs 120 scientists. It also houses the Lions Eye Bank, Western Australia's only donor eye tissue facility, and the Lions Save Sight Foundation.

In addition to its highly-regarded research program, LEI conducts LASIK operations (laser surgery to correct vision), cataract removal procedures and the Elsie Gadd Eye Centre. These operations generate over 60% of the Institute's income, with research grants accounting for around 25%

LEI treats around 40,000 patients annually, with many of these coming from South East Asia. It sees great potential for growth in these markets, pointing out that Australia currently attracts only about 1% of the potential \$100m outbound Indonesian eye-health market. LEI is already active in South East Asia, running intensive training programs for Indonesian ophthalmologists under a Memorandum of Understanding between UWA and universities in Jakarta and Surabaya.

LEI has a strong track record in winning competitive research grants, and is currently working on new methods of diagnosis and treatment including a telemedicine system for diagnosis of eye diseases.

Box 9 Clinical Cell Culture

The use of skin grafts from a patient's own skin for burns treatment has been shown to greatly improve healing and reduce scarring in burns victims. Clinical Cell Culture (C3) was founded by Dr Fiona Wood and Marie Stoner in 1999 with a view to commercialising the successful research of the McComb Foundation and the WA Skin Culture Unit. C3's technology is based around accelerating the rate of growth of skin cells, and developing innovative methods for delivery, with CellSpray® earning the nickname 'spray-on skin'. In 2000, C3 opened its laboratory and production facilities at Technology Park in Bentley.

C3 developed ReCell® with assistance from a Western Australian Innovation Support Scheme grant, which provided matching funds toward the research and development needed for the new product.

The success of C3's technology has seen its use spread around Australia and internationally. CellSpray is being used in the UK, and C3 sees great potential for success in Europe. The process is pending regulatory approval in several European countries and by the American FDA. ReCell is on track for release in Australia, Asia and Europe during 2004.

Regulatory approval has become a key issue for C3, with the company recently having to redesign its US market entry strategy after classification of CellSpray as a biological device, which will set back the US market launch of CellSpray by around 12 months. On the other hand, ReCell has been classified as a medical device, allowing an expedited approval process.

As part of its expansion into European markets, C3 has appointed a London-based Director with experience in medical products, and has sought to form distribution alliances with local companies. Most recently, C3 announced an agreement with Health Defence S.P.A. of Italy as sales agent for CellSpray and distributor for ReCell.

5.2 Sound Business Models

The optimal use of forward and backward linkages between domestic producers and external markets for health industry services, is another crucial element of any successful export strategy. Western Australian organisations looking to export can adopt a range of export strategies. Although the suitability of each business model depends on the legal environment, commercial environment and general operating conditions, successful export strategies often include:

- national and international strategic alliances;
- joint ventures; and
- licence agreements.

National and International Strategic Alliances

Under either a national or international strategic alliance, a Western Australian company would agree to collaborate in a venture or share resources and information with another domestic or overseas company. This is an important market entry strategy because it helps to establish critical mass in target markets through pooled resources and enables the foreign organisation to exploit the customer base and market knowledge of its overseas alliance partner. Importantly, this market entry strategy also provides firms with access to additional sources of finance.

Box 10 HealthCare WorldWide Pty Ltd

The experience of HealthCare Worldwide Pty Ltd (a Western Australian provider of health and medical services management; integrated clinical services; medical and paramedical training and telehealth and telemedicine) is that Western Australian companies must form strategic alliances to effectively present Medical Service programs in the market place.

Key national strategic partners in Health Service delivery include:

- doctors and paramedical personnel delivering health services and training;
- universities providing academic, research and a training base; and
- technology providing equipment and skills.

The competition in the market place for delivery of health services will increase as the potential profits of the industry are recognised. Consequently, such strategic alliances are necessary for Western Australia to be successful in the international market place.

Box 11 Raffles Medical Group

Singapore's Raffles Medical Group has formed strategic alliances through triangular business associations with health care organisations from developed countries in partnership with host country investors. The aim of these strategic alliances is to develop an integrated network of health care companies offering a range of quality and cost effective health services.

Joint Ventures

Joint ventures, in which alliance members establish and jointly own a new independent organisation, have also been applied as business models in the health services field with great success.

Box 12 Parkway Group

The Singapore-based Parkway Group has acquired hospitals in Asia and the UK and has formed joint ventures with partners in India, Indonesia, Malaysia, Sri Lanka and the UK, to create an international chain of hospitals under the Gleneagles International brand. The Group's health care network includes Shenton Medical Group, one of Singapore's biggest general practices; Medi-Rad Associates Ltd, a leading radiology service company in Asia; and Parkway Laboratory Services Ltd, a major provider of laboratory services regionally. The Group is also a pioneer in the private health care industry providing contract research services through subsidiary Gleneagles CRC Pte Ltd.

Parkway also has offices in China, Bangkok, Bangladesh, Hong Kong, Indonesia, Myanmar, Philippines, Russia and Sri Lanka.

Licence Agreements

Licensing agreements have also become a popular route for small firms to gain access to international markets. Nowadays, large international firms are increasingly willing to pay for small firms' intellectual property either through its sale or by means of some form of licensing arrangement whereby a firm pays for access to the intellectual property for a prescribed period of time.

Typically, private sector health service providers engaged in research and innovation, have adopted this market entry strategy as a means of gaining additional funding and overcoming regulatory hurdles such as FDA approval in the US.

Knowledge and Experience

Since international trade is built around international specialisation and based on comparative advantage, knowledge and experience in exporting are essential prerequisites for successfully engaging in export markets. The Department of Industry and Resources and the Department of Foreign Affairs and Trade's Austrade division provide country knowledge, market intelligence and advice on appropriate entry strategies. Undoubtedly country knowledge, incorporating cultural awareness and local business partners, is an essential prerequisite for all budding exporters.

6 Health, Education and Tourism

Trade in health services, education and tourism is complimentary and inter-related. Health service exports frequently take the form of either health tourism or education and training of foreign medical staff. An increase in the amount of training provided to foreign practitioners not only promotes Western Australia's health sector, but typically also has flow-on effects for the State's education and tourism industries.

6.1 Education and Tourism – Successful Strategies

The promotion of Australia's education services to overseas students has helped education services become a \$5.03 billion per annum industry. The nature of health service exports is such that similar (or indeed the very same) strategies can be used to promote Australian health service exports.

The Australian Government International Education Network (AEI)

AEI is an initiative of the Commonwealth Department of Education, Science and Training which aims to promote and develop the Australian international education and training industry. AEI works through a physical presence in Australian government missions overseas and promotional activities including a multi-lingual website for prospective students. By working in partnership with Australian government agencies and foreign governments, AEI seeks to assist all Australian educational institutions in their efforts in the international marketplace.

AEI provides research reports and target-country profiles for Australian institutions, helping to develop appropriate marketing strategies. AEI also provides services such as qualification recognition and scholarship support to encourage top overseas scholars to visit Australia for post-graduate study or employment.

Strategic Partnership with Agencies such as Austrade

Austrade provides Australian companies and institutions with services and support to develop export markets for their businesses. Like AEI, Austrade provides an in-country presence and target market profiles for potential exporters. These help businesses reduce the time, risk and expense in identifying and developing overseas markets.

Public-Private Partnerships, Joint Ventures and Twinning

In order to identify, and take advantage of overseas opportunities, private organisations sometimes form partnerships to secure funding, expertise or local knowledge. Through public-private partnerships, companies can join with government agencies to provide a service. Facilitation through agencies such as AEI and Austrade has also been utilised to assist developing trade links.

Partnerships with other non-government bodies allow local companies to take advantage of market opportunities where their partner brings specialised know-how or local market knowledge to the project.

Twinning agreements between States, or between educational or medical institutions, offer a formal bond within which to build cooperation and collaboration between partners.

6.2 Health Tourism

Health tourism is defined as people who travel for health or medical-related reasons. This refers not only to those who travel for specific medical treatment, but also to people who travel with a health-related motive in mind such as stress reduction, weight loss or fitness. Health tourism brings advantages to the host country both by increasing tourism, and by increasing the consumption of health and medical services.

With an aging world population and greater affluence in the Asia Pacific region, people are travelling increasingly for health and medical reasons. This provides opportunities for Australian health service providers to market their services internationally. Throughout South East Asia, health and wellness tourism is increasing, as a wide assortment of services that promote physical well-being are offered. These services range from idyllic holiday packages bundled with everything from spa to cosmetic treatments to cardiovascular surgery, and from diagnostic services to rehabilitative herbal treatments. Medical tourists do not only benefit the health sector since visitors seeking treatment or accessing health services are typically accompanied by family members or friends.

Impact on Tourism

Health tourism offers a way to expand tourist activity in Western Australia. Tourism and related sectors are substantial employers and contributors to the State's economy. Health tourism helps reach the objective of the Commonwealth Tourism White Paper³⁰ in developing a diversified and sustainable tourism industry. Demand for health tourism is likely to be more stable than the usual highly seasonal tourist trade.

By marketing Western Australia as a health tourism destination, the State is likely to attract a wider range of travellers who will be encouraged to consume a wider than usual variety of services whilst in the State. This will increase the contribution of tourism to Western Australia's economy.

Impact on the Health Sector

The private health sector has much to gain from an inflow of tourists seeking medical care. This increased patient base creates opportunities to develop specialised facilities that might not otherwise be viable, and to spread capital expenditures over a greater range of patients. This presents opportunities for profit, and for an increased standard of health care to the local population.

The packaging of services to international patients can be a key ingredient in developing an overseas market. By addressing those factors that discourage patients from overseas medical care, a hospital can present attractive package deals to potential patients.

³⁰ Australian Government's Tourism White Paper: *A Medium to Long Term Strategy for Tourism* November 2003.

Box 13 Apollo Hospital Group

The Apollo Hospital Group is India's largest health and medical services corporation. It operates 21 health care centres including 7 hospitals, covering the entire spectrum of medical care.

The Apollo Group encourages visits by foreign patients, offering an extended range of services including airport pickup, translating service and accommodation for any family members. The hospital sets up the capacity for 'virtual visits' for family and friends who do not make the journey with the patient – this allows well-wishers to check on a patient, send messages and order flowers for the patient.

Health care organisations in South East Asia are increasingly offering packaged, 'off-the-rack' treatment options to foreign patients. These options have proven successful in attracting patients for elective surgery. Package deals need not include medical services – health tourism can be linked with adventure/fitness tourism, health spas and cosmetic health procedures. Thailand has gained a reputation for health tourism, with many destinations offering recreation and relaxation programs, and some medical clinics catering specifically for tourists looking for cosmetic surgery. This has gone as far as marketing Phuket as a destination for sex change operations³¹.

6.3 Education and Health Industry Services Trade

A large part of the potential for export of Australian health services falls within the fields of education and training. Australia has a strong track record in marketing its education services to overseas potential students, and its reputation for excellence in health and medicine should ensure a ready market for Australian knowledge and expertise.

The Lion's Eye Institute (see Box 8) is a good example of a local institution providing training in partnership with foreign institutions. LEI trains many of the ophthalmologists throughout South East Asia through Memoranda of Understanding with universities in Indonesia and Singapore. International partnerships have also resulted in the Institute training doctors from Malaysia, Japan, Philippines, India and Thailand.

Given the importance of accreditation and recognition of medical qualifications internationally, well-respected Australian training institutions should have an advantage over other areas within South East Asia.

One of the great advantages of foreign medical personnel undergoing Australian training is the personal bonds and attachments that are built between the foreign practitioner and Australia. These bonds will help attract referrals of foreign patients, and help to build collaborations between institutions in different countries.

³¹ <http://www.cnn.com/2001/WORLD/asiapcf/southeast/08/24/thailand.sexchange/>.

7 Impediments to the Export of Health Industry Services

Three broad categories of barriers to trade in health services can be identified. Following on from the discussion in Section 2.3, it is seen that the GATS modes of supply framework provides a useful way analysing impediments to health services export.

7.1 Cross Border Supply

This mode of supply is currently little utilised within the health services sector. Here, the supplier operates from their home country, providing a service in a foreign country such as telemedicine, distance education (or curriculum design) or diagnostic services. These types of services are usually intensive users of telecommunications services. With increases in the quality and cost-effectiveness of telecommunications and information technology, this mode of service provision can be expected to increase.

Operating across borders creates a potential minefield of legal issues for practitioners. Jurisdictional issues are significant – where is the service being provided, and whose law applies? The answers to these questions are important for contractual certainty and professional indemnity insurance.

In practice, contractual issues are able to be resolved satisfactorily through legal advice. Industry concerns lie much more with insurance cover and the applicability of the foreign country's laws to professional accreditation/licensing and patient confidentiality. Insurance products typically purchased by Australian practitioners cover only actions brought under Australian law. To insure against actions in foreign jurisdictions, practitioners must either purchase a separate foreign insurance policy or negotiate with their Australian insurer. Both options require a great deal of expense and effort to resolve satisfactorily. With regard to the application of foreign laws to accreditation, there is a role for government to play in facilitating cross-border recognition of Australian qualifications.

7.2 Consumption Abroad

This mode of service provision involves the patient travelling abroad to the home country of the provider. Likely reasons for this travel include specialised or advanced treatment not available in the home country, or a price or quality advantage over the home country. Australia's reputation as a first-world nation with advanced health care and skilled practitioners means that foreign patients will seek Australian health services for their quality.

Foreign patients coming to Australia may face problems relating to visa requirements for the patient and their immediate family, along with language and cultural barriers.

Visa Requirements

Australia offers persons seeking to visit Australia for medical treatment a Medical Treatment Visa (MTV) class 675 or 685 visa. A 675 visa is for a stay of less than 3 months, and a 685 visa for a stay of more than 3 months. An MTV can also be issued to an immediate family member accompanying the patient.

These visas require that the applicant show an ability to support themselves for the duration of the trip, including meeting medical expenses, the expenses of any travelling partners and the cost of returning home. They must also satisfy Department of Immigration, Multicultural and Indigenous Affairs (DIMIA) requirements that they do not have a condition that poses a threat to public health in Australia.

More difficult are the conditions that the patient have a defined course of treatment approved by the destination medical provider, and have undergone a health evaluation by a specialist in the patient's home country. These requirements make clear that a patient must have undergone medical assessment in their home country, and underline the potential for partnerships between Australian and overseas institutions. Australian service providers seeking foreign patients may profit from a relationship with foreign providers who can provide the preliminary diagnosis and assessments required for an MTV and notify the patient as to the possibility of treatment in Australia.

Recommendation

The State Government should actively advocate for a relaxation of national medical visa requirements for inbound patients and supporting family and friends. Specific areas for consideration/examination include medical visa processing times and the appropriateness of health check requirements.

Language and Cultural Barriers

Doing business with foreign companies and attracting foreign patients inevitably involves dealing with language and cultural difficulties. Potentially attractive markets for Australia include South East Asian neighbours such as Indonesia and Malaysia, along with Middle Eastern countries including Saudi Arabia and the United Arab Emirates. Each of these countries has unique business etiquette, with a common theme being the predominance of diverse cultural and religious beliefs. Business difficulties are often dealt with through partnership with a local firm or agent, and government agencies such as Austrade offer specialist information to potential market entrants.

It is imperative that service providers in Western Australia raise their awareness of the special needs and communication difficulties that can be encountered in treating non-English speaking patients, and those with diverse cultural and religious backgrounds.

7.3 Commercial Presence

The establishment of a permanent commercial presence in a foreign country is another way to deliver services to foreign markets. These arrangements often take the form of joint venture or partnership arrangements, which provide valuable local knowledge and access to accredited local staff.

In this context, health service providers can face government policies that discriminate against overseas entrants into the marketplace. These can include:

- limits on foreign equity ownership;
- discriminatory tax arrangements;
- restrictive competition policies (including a lack of competitive neutrality);
- clearance being required from the Ministry of Health;
- quantitative limits on the numbers, location, staffing and management of foreign establishments; and
- pre-emptory political decisions.

Changes to these policies generally require high-level negotiations with the relevant foreign governments.

Good examples in recent times include the Free Trade Agreements signed with Singapore and the USA, which provided that Australian firms would be accorded non-discriminatory treatment in government procurement contracting in a wide range of sectors. Negotiations with Thailand indicate that a substantial liberalisation of trade in services is likely. The Free Trade Agreements signed so far have achieved gains in access to government procurement processes, but also relaxed rules for direct investment and wider recognition of Australian qualifications and professional accreditation.

Politics can also subtly influence proceedings. For example, intergovernmental agreements on trade liberalisation would seem to be a useful way of ensuring that Australian firms are able to compete on their merits in foreign countries. Similarly, memoranda of understanding between state governments have potential to break through barriers of entry into foreign markets.

7.4 Movement of Natural Persons

The temporary relocation of staff is a common form of health care delivery. Examples include on-site training and education provision and short-term nursing staff. The movement of medical personnel to the foreign destination requires immigration and work permit approval and recognition of the qualifications/accreditation of Australian professionals.

Immigration and work visa applications can become problematic where the destination country imposes quantitative limits on entry, or strict eligibility conditions for entry. Application fees and processes can become costly in terms of time and money, making travel less attractive. For these reasons, recent Free Trade Agreements have taken steps toward making business visas easier to obtain, and relaxing conditions on how business is to be conducted within the destination country. Thailand, for example, has agreed to give Australian business persons access to a 'one-stop shop' for all visa and work permit applications and information, and has relaxed conditions. Once the FTA is implemented, Australian business persons will be able to stay longer, will not require a work permit for trips of less than 15 days, and will be able to attend meetings anywhere in Thailand without a requirement to notify Thai authorities. This relaxation will make travel to Thailand less expensive and much more streamlined for Australian business-people.

8 Nurturing Trade in Health Industry Services

8.1 Critical Success Factors

A successful strategy for increasing trade in health services must address a number of critical success factors. These are:

- supportive government resourcing;
- national and international recognition;
- a commitment to exporting;
- collaboration and support;
- a supportive macroeconomic and international trade environment; and
- commercial viability/profitability.

Supportive Government Resourcing

As the Department of Industry and Resources is the leading agency in promoting Western Australian services trade, TIAC recommends that the Government allocate sufficient resources to support and manage the State's health services trade effort.

Recommendation

Additional resources should be allocated to the Department of Industry and Resources (DoIR) in the 2005-2006 State Budget to support business development and trade in Western Australian health services.

Trade in the health services is strategically important in achieving the goal of a more diversified economy. Given the synergies in trade in health services, education and training and tourism, TIAC recommends that the Government appoint an advisory forum to advise the Ministers of State Development, Health, Education and Training and Tourism on strategic policy issues related to health services trade and the synergies between state development, health, education and tourism. TIAC proposes that the advisory forum be made up of industry representatives with experience/interest in at least two of the areas, and an independent chairman. Executive support could be provided by the Department of Industry and Resources.

Recommendation

The State Government should establish a Ministerial Advisory Forum (for a period of two years) on trade in health services and attaining benefit from the synergies between trade in health services, education and training and tourism.

National and International Recognition

Expansion of Western Australia's trade in health services requires better recognition of local health services capabilities both nationally and internationally. One course of action that TIAC recommended in Section 3.1 was an update of the *Western Australian Health Industry Directory of Services and Products* and the development of a comprehensive Western Australian health services capability statement. Not only would these documents provide invaluable information on the sector's depth and diversity, they would also facilitate and support the promotional efforts of the Western Australian Government's Trade Offices and Austrade.

TIAC also recommends the establishment of a Health Services Industry Organisation to enhance the sector's profile and provide a focal point for marketing and promotional initiatives. Such an organisation could be responsible for providing strategic direction for the sector. This could include: the creation of a business and marketing plan, conducting trade missions, hosting overseas delegations and developing a dedicated website and information pack. The organisation would also be influential in fostering business and trade networks, ensuring best practice and providing a platform for businesses and organisations to influence government policy. Nevertheless, the success of this industry organisation would critically depend upon the support and leadership of influential industry identities.

It is also essential that the newly formed industry organisation forge close ties to affiliated associations such as the Chamber of Commerce and Industry, AusBiotech Ltd (formerly the Australian Biotechnology Association) and the Australian Medical Association.

Recommendation

In order to raise the sector's profile, the State Government (through DoIR) and in conjunction with the Western Australian Health Services Industry Organisation, should establish procedures for reviewing and updating *The Western Australian Health Industry Directory of Services and Products*.

Regular updates of the Directory (e.g. annually) would enable the State Government and the Industry Organisation to:

- maintain a comprehensive Western Australian Health Services Capability Statement; and
- monitor and match Western Australia's health services capability to emerging export opportunities.

Recommendation

As part of the State Government's drive to promote services trade generally, the Western Australian Government (through DoIR) should foster the establishment of a Western Australian Health Services Trade Organisation. This industry organisation would work in conjunction with DoIR and consult with other State Government agencies (e.g. TourismWA, the Department of Education and Training and the Department of Health) to enhance the sector's profile and provide a focal point for focussed marketing and promotional initiatives nationally and internationally.

Specifically, the industry organisation would contribute to :

- developing a business and marketing plan for trade in Western Australian health services;
- planning trade missions;
- hosting international delegations;
- strengthening and encouraging business and trade networks and increased collaboration amongst Western Australian health services organisations; and
- lobbying Federal Government for a review of medical visa conditions.

A Commitment to Exporting

It is critical that management and key personnel are committed to exporting for companies and institutions to succeed in international markets. Export markets are typically far more demanding and are often riskier than domestic markets. Therefore, owners and managers must raise their awareness and understanding of international business opportunities and practices. For example, it is vital to appreciate critical success factors for doing business in Asian countries as each country has its own unique business culture. These include:

- selection of good business partners in the region;
- development and maintenance of sound business relationships and mutual trust;
- recognition that the time horizon in Asian markets is much longer than in Australia; and
- recognition of the cultural sensitivities in Asian countries.

Although prospective exporters can obtain advice on doing business internationally from State and Commonwealth agencies, this advice is not targeted at the health services sector. TIAC therefore recommends that the Department of Industry and Resources in conjunction with the West Australian Health Services Industry organisation develop an information pack (brochure/CD Rom/webpage) for health services trade.

Recommendation

The Western Australian Health Services Industry Organisation and the Western Australian Government (through DoIR) in collaboration with other State Government agencies) should also work together to establish the information needs for successful health services trade and develop strategies and initiatives according to priorities.

Collaboration and Support

In many instances, local firms or institutions may not have the necessary resources to service market opportunities as they arise. For example, the universities and other Western Australian educational institutions are often invited to deliver educational and training courses offshore. On occasions, they find they lack the necessary resources to meet these requests. This problem could be overcome if institutions were prepared to collaborate with rival domestic organisations. Equally, two organisations (which compete domestically) joining together could provide the critical mass necessary to successfully compete in export markets. In fact, collaboration through the AEI has already proved successful in promoting education services internationally.

Recommendation

The State Government (through DoIR) in collaboration with the Western Australian Health Services Industry Organisation, should encourage the State's higher educational institutions and health service providers to explore opportunities for collaborating in the provision of health education and training and other health-related services.

For firms and organisations to successfully engage in exporting, they need access to networks and resources. Experience shows that this type of support is often provided through industry clusters³². The formation of a health services cluster would promote export activity by facilitating contact with overseas companies, direct marketing, branding of the cluster, niche product marketing and showcase events. Clustering would also allow exporters to gain access to national and international networks, helping them to overcome size constraints and improve their competitive position.

The beginnings of such a cluster already exist at the QEII medical complex, and to a lesser extent at Technology Park, Bentley. A health services cluster may form part of a broader health cluster which could also include biomedical sciences. For example, there is also potential for clusters to develop in nursing education at Edith Cowan University.

The formation of a health services cluster is, however, a long-term strategy. Experience elsewhere suggests that full cluster development can take 10 years or more. Consequently, the full benefits of a health services cluster are unlikely to be realised in the short-term. Nonetheless, companies in the cluster would still derive considerable benefit from informal networking and developing supply chains that clusters foster.

Recommendation

The Western Australian Health Services Industry Organisation (in conjunction with both public and private sector organisations) encourage the development of Western Australian health services clusters.

³² Porter (1998) defines a cluster as a “*geographic concentration of interconnected companies, specialised suppliers, service providers, firms in related industries, and associated institutions (e.g. universities, standards agencies, and industry organisations) in particular fields that compete but also cooperate.*”

Supportive Macroeconomic and International Trade Environment

The macro-economy, in terms of inflation, interest rates, and the exchange rate, defines the business climate in which firms operate. While there is little firms can do to influence the macro-economy, it is important that they understand fully the impact that changes in the macro-economy can have on their business.

8.2 Conclusion

The global health sector has undergone considerable change over the past decade or so. These changes are presenting significant opportunities for Western Australian health services providers, especially in the Asian region. Pursuing these opportunities is entirely consistent with the Government's objective of moving the economy towards a greater knowledge base.

The global environment for trade in health services is extremely competitive. If Western Australian organisations are to take full advantage of expanding health services spending and emerging trade opportunities, the Government must support their endeavours by providing appropriate assistance and resources through the Department of Industry and Resources. In addition, as a matter of priority, the formation of a Western Australian Health Services Industry Organisation should be encouraged to raise the profile of the sector.

In addition to directly contributing the Western Australia's economic well-being through increased output and high-value knowledge intensive jobs, the export of health services has the potential to improve the State's medical knowledge and skills, technological capacity and health care standards through technology transfer and the experienced gained in servicing the export market. It may also lead to greater investment in the health sector in Western Australia.

9 Bibliography

Building Future Prosperity: Creating Jobs and Wealth through Industry Development, Industry Policy Statement of the Western Australian Government, January 2004.

The Western Australian Health Industry Directory of Services and Products, the Department of Commerce and Trade, 1996.

A Healthy Future for Western Australians - Report of the Health Reform Committee, 26 March 2004.

Trade in Health Services, Commission on Macroeconomics and Health – Working Paper No. WG 4:5, Rupa Chanda, June 2001.

International Trade in Health Services: A Development Perspective, UNCTAD/WHO joint publication, Geneva, 1998.

Health at a Glance: OECD Indicators 2003, Organisation for Economic Co-Operation and Development, 2004.

Singapore's Man with a Plan: The Economist, August 14, 2004, p.54.

Sun, Sand, Surf and...Stethoscopes? The Hong Kong General Chamber of Commerce: Bulletin, March 2004.

WHO International Consultation on Assessment of GATS and Trade in Health Services: Research and Monitoring Priorities, World Health Organisation, January 2002.

WTO International Trade Statistics 2003, World Trade Organisation, 2003.

Drivers and Shapers of Economic Development in Western Australia in the 21st Century, TIAC 2000a.

Export of Western Australian Education and Training: Constraints and Opportunities, TIAC 2000b.

Website of Austrade, <http://www.austrade.gov.au>.

Special Report: China's Health Care, The Economist, August 21, 2004, p.20.

Australian Spas and Retreats, Clark, A.J. & Mackevicious, A.. (2000). Hong Kong: Periplus Editions (HK) Ltd.

Website of Austcham, <http://www.austcham.org>.

Putting Children First, Telethon Institute for Child Health Research, Annual Report 2003.

Determinants of Successes and Failures in Telehealth, Journal of Telemedicine and Telecare 2003, 9 (Supplement 2): S2:22-24.

The effectiveness of digital imaging and remote expert wound consultation on healing rates in chronic lower leg ulcers in the Kimberley region of Western Australia, Santamaria N, Carville K, Ellis I & Prentice J. *Primary Intention* 2004; 12(2): pp.62-64,66-68, 70.

A Medium to Long-Term Strategy for Tourism, Australian Government Tourism White Paper, November 2003.

Website of CNN, <http://www.cnn.com/2001/WORLD/asiapcf/southeast/08/24/thailand>.

Clusters and the New Economics of Competition, Porter, M.E. (1998), *Harvard Business Review*, November/December 1998, Vol 76: p.77-90.

A Global Health and International Health Trends

The global health situation is characterised by vast inequities in health care and a widening gap in life expectancies between developed countries, developing countries and the least developed countries. The challenge for the global health community is how to redress this imbalance and enable countries to address the significant health issues faced by them.

The World Health Organisation in its *The World Health Report 2003* (WHO 2003) identified the key global health challenges to be:

- infant mortality;
- premature adult mortality:
 - HIV/AIDS;
 - other communicable diseases;
 - non-communicable diseases;
 - injuries;
- ageing populations; and
- mental ill-health and substance use disorders.

In addition, the WHO (2003) *Report* reinforced the need for health systems worldwide to be strengthened in order to be able to confront the global health challenges listed above. In this context health systems are defined to comprise all organisations, institutions and resources that produce actions with the prime purpose of improving health.

The WHO *Report* identified four important issues, which health systems around the world must confront. These are:

- the global health workforce crisis;
- inadequate health information;
- lack of financial resources; and
- the role of government in implementing pro-equity health systems.

The key global health challenges and the health system issues outlined above encapsulate some of the principal overseas market opportunities for Western Australia's health services.

Another trend in the global health services sector is the growing appreciation in developing countries of the significant trade opportunities in their health services sectors. Globalisation and technological progress continue to present developing countries with opportunities to strengthen their supply capacity and expand their exports of a range of services, including health services. This trend is likely to foster increased competition for Western Australian product.

The United Nations Conference on *Trade and Development (UNCTAD) Report of the Expert Meeting on Strengthening the Capacity and Expanding Exports of Developing Countries in the Services Sector: Health Services*, held in June 1997, identified the major driving forces for the expansion of trade in health services to be:

- an increased demand for health care;
- the phenomenon of consumerism;
- a relative shortage of health personnel in some developed countries;
- an aging population requiring tailor made products;
- the information/technology revolution;
- increased mobility of consumers and service providers; and
- increasing medical costs and decreasing public health care budgets requiring containment of health care costs.

Health services in developing countries have a comparative advantage arising from a number of factors, including:

- lower production costs;
- provision of unique services;
- potential to combine health care and tourism; and
- natural resources with perceived curative benefits.

However, a lack of export strategies and trade promotion, coupled with poor public sector-private sector relations, has been an impediment to realising this potential.

UNCTAD (1999) identified a range of issues that needed to be addressed by developing countries in order to exploit the potential trade opportunities in health services. These issues which apply equally to Western Australia are:

Movement of Service Suppliers

A long-standing problem for developing countries is the outflow of health personnel (the brain drain). This problem is exacerbated by measures which permitted health professionals to move across borders. Ways of alleviating the problem include: compensatory arrangements for loss of personnel, reimbursement of training costs to developing countries, incentives to encourage health personnel from developing countries to remain in their home countries and trainees to return to their home countries, and the creation of regional training facilities.

A number of barriers impede the movement of service suppliers, including: visa and entry regulation, nationality and residency requirements, and licensing and recognition of qualifications. Some of these impediments can be addressed under the GATS. At the multilateral level there is a need for the promotion of transparency in standards and qualifications requirements, as well as the development of global standards based on scientific knowledge.

A special visa regime for temporary movement of service suppliers and the facilitation of entry requirements were also proposed to lower barriers to suppliers.

Treatment of Foreign Patients

A key issue in the treatment of foreign patients is the portability of health insurance. The lack of portability is a deterrent to the movement of patients wishing to be treated abroad. A number of approaches, including bilateral agreements which allowed total or partial portability of public health insurance, have been proposed. Ultimately, a global agreement on the portability of health insurance is needed.

Another issue in the treatment of foreign patients is the possibility of crowding out of nationals by foreign patients paying a premium. However, it is argued that the inflow of foreign patients could help improve the quality of services offered. The challenge is to ensure that the services offered to foreigners are available to nationals.

Foreign Investment in the Development of Services

UNCTAD sees a role for developing countries to work with least developed countries (LDCs) to strengthen their capacity to provide specialised health services to their populations by procuring required modern medical and surgical equipment and training physicians and surgeons in delivering these specialised services. UNCTAD considered that affiliation/partnership with reputable health service institutions in developed countries would enhance service facilities in developing countries by improving the image and quality of services, as well as promoting research and development.

One concern is that investment by foreign hospital chains in developing countries may lead to resources being drawn away from the public health sector. This is the phenomenon of 'cream skimming' whereby foreign hospitals provide services to patients able to afford the cost of treatment.

The outcomes of cream skimming are not entirely negative as the switch of patients from the public to private health system can free up human and financial resources available to public health facilities. According to UNCTAD the challenge for governments is how to enforce the commitments made by foreign suppliers with regard to the social aspects of health care.

Another form of investment in developing countries was through partnership with firms from developed countries to establish specialised medical services combined with tourism services.

A number of barriers exist to foreign investment in the health services sector of developing countries, including:

- competition policy;
- discriminatory tax treatment;
- negative campaigning against private operators;
- incentives and impediments relating to investments by expatriates; and
- the duality between private and public health services.

UNCTAD pointed out that liberalisation of foreign direct investment and supply of services by the private sector required appropriate regulation to ensure that the supply of services meshed with national health policy.

The Role of New Technologies and New Ways of Delivering Services

Telemedicine and the Internet offer new opportunities in the provision of health services. Telemedicine is seen as a way to address a number of issues, including equity, cost containment, optimising the use of expensive technology and specialised medical services, upgrading of health treatment, improving access of patients in remote areas to primary and specialised health services, and regional sharing of knowledge and cooperation.

A greater uptake of telemedicine may impact on other modes of supply of health services as patients would be less likely to travel abroad, and medical professionals and students would have access to medical education from foreign countries without the need to go overseas.

Some in UNCTAD were sceptical about whether telemedicine would become a major tool in trade in health services because of the substantial investment needed in technology and equipment, and because of technical and ethical problems that need to be overcome. These problems relate mainly to quality, liability, scientific reliability, recognition of qualifications, standards and licences, insurance cover, and confidentiality of information.

B Liberalisation of Trade in Services

The World Trade Organisation

The WTO was established in 1995 at the conclusion of the Uruguay Round of multilateral trade negotiations under the GATT. The WTO replaced the GATT as an international organisation, although the General Agreement still exists as the WTO's umbrella agreement for trade in goods.

The WTO is governed by three agreements covering goods, services and intellectual property. These agreements, often referred to as the WTO's trade rules, are:

- General Agreement on Trade and Tariffs (GATT);
- General Agreement on Trade in Services (GATS); and
- Trade-Related Aspects of Intellectual Property (TRIPS).

The GATS and TRIPS Agreement are very relevant to trade in health services and will be discussed in more detail in the next sections of the report. Readers interested in GATT should refer to the WTO website (<http://www.wto.org>).

General Agreement on Trade in Services

The General Agreement on Trade in Services (GATS) came into force in 1995 with the objective of gradually improving market access by removing all barriers to trade in services. Australia has been a signatory to the GATS since its inception.

The GATS was negotiated as part of the Uruguay Round in response to the considerable growth in services over the previous 20 years. The WTO (2003) estimates that services now account for 60 per cent of global output, 30 per cent of global employment and nearly 20 per cent of global trade.

The GATS covers all internationally traded services with two exceptions: services provided to the public in the exercise of governmental authority; traffic rights; and all services related to the exercise of traffic rights in the air transport sector.

The GATS defines health services to include: medical and dental services; services provided by midwives, nurses, physiotherapists and para-medical personnel; hospital services; and other human health services.

Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS)

The TRIPS Agreement is aimed at getting greater uniformity in the way intellectual property rights are protected around the world, and to bring them under common international rules. It establishes minimum levels of protection that each member country has to give to fellow members.

The Agreement covers five broad issues:

- how basic principles of the trading system and other international intellectual property agreements should be applied;
- how to give adequate protection to intellectual property rights;
- how countries should enforce those rights adequately in their own territories;
- how to settle disputes on intellectual property between members of the WTO; and
- special transition arrangements during the period when the new system is being introduced (WTO 2003).

Like the GATS, the TRIPS Agreement is based on the two key principles of non-discrimination – national treatment and most-favoured-nation treatment. The Agreement has an additional important principle that intellectual property should contribute to technical innovation and the transfer of technology. The Agreement says that both producers and users should benefit, and economic and social welfare should be enhanced (WTO 2003).

Of particular relevance to health services is the requirement in the Agreement for patents to be granted in all ‘fields of technology’, regardless of whether it is in the public interest to do so. The most notable example of the controversy surrounding this requirement has been the debate over AIDS drugs in Africa.

In recognising the importance of this issue, governments in the November 2001 Doha Declaration agreed to allow countries to ignore worldwide patent protection for drugs deemed important to protecting public health. It is expected that this will enable governments like South Africa to cheaply clone expensive AIDS medicine for their populations. However, countries with insufficient or no manufacturing capacities in the pharmaceutical sector could face difficulties in making effective use of compulsory licensing under the TRIPS Agreement (WTO 2001).

C Highlights of Industry-specific Restrictions on Health Industry Services

Table C1 Summary of Industry-specific Commitments Scheduled by Asia/Pacific Trading Partners, by Industry, under GATS

	Australia	Hong Kong	India	Indonesia	Korea	Malaysia	New Zealand	Philippines	Singapore	Thailand
Distribution	X	X			X		X			X
Education	X						X			X
Enhanced Telecommunications	X	X	X	X	X	X	X	X	X	X
Audiovisual		X	X		X	X	X		X	X
Courier		X					X		X	
Health Care	X		X			X	X		X	
Accounting and Finance	X	X			X	X	X		X	X
Advertising	X	X			X	X	X		X	X
Legal	X					X	X			X
Architectural and Engineering	X		X	X	X	X	X		X	X
Construction	X	X	X	X	X	X	X		X	X
Transportation	X				X		X	X		X
Travel and Tourism	X	X	X	X	X	X	X	X	X	X

Data source: U.S. International Trade Commission. General Agreement on Trade in Services; examination of the schedules of commitments submitted by Asia/Pacific trading partners. Publication 3053, August 1997.

D Steering Committee and Consultation Team

The membership of the Technology and Industry Advisory Council (TIAC) Steering Committee for this project is listed below:

Professor Lance Twomey (<i>Chair</i>)	Vice-Chancellor, Curtin University of Technology
Dr Rosanna Capolingua	Member of the Federal Executive of the AMA
Mr Ben Constable	Managing Director, Argus Biomedical
Professor Michael Henderson	MEDSCI International Healthcare
Professor Linda Kristjanson	School of Nursing, Edith Cowan University
Dr Brian Lloyd	Deputy Director of Health Care, Department of Health and Chief Medical Officer
Ms Sasha Pandal	Deputy Director of External Relations, The Lions Eye Institute
Dr Andy Robertson	Acting Deputy Director of Health Care, Department of Health and Chief Medical Officer
Dr Eric Tan	Chancellor, Curtin University of Technology
Ms Lyne Thomas	Assistant Director General Development Strategies, Department of Industry and Resources
Professor Charles Watson	Executive Dean, Health Services, Curtin University of Technology
Dr Desmond Williams	Managing Director, HealthCare WorldWide Pty Ltd

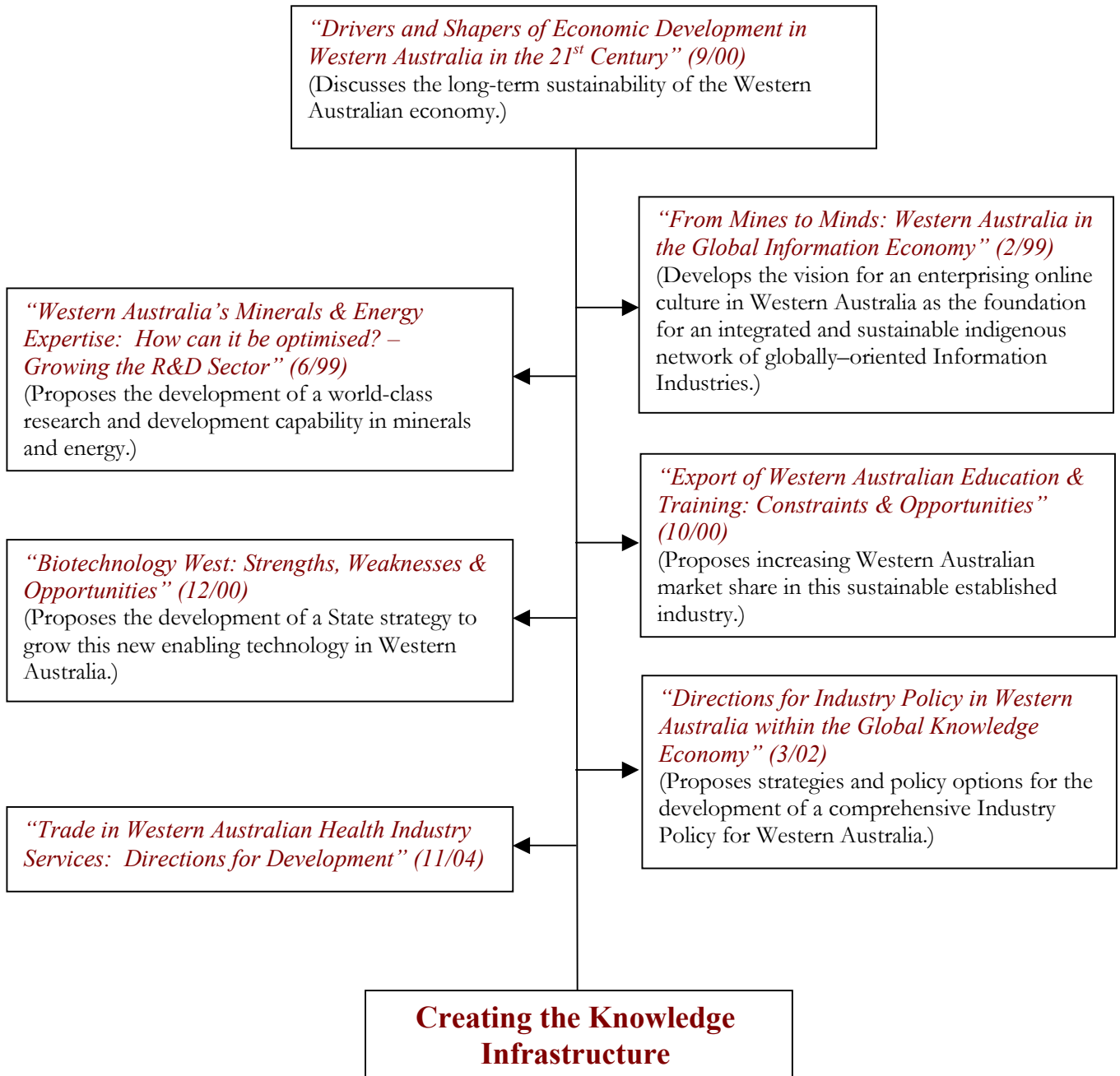
The Steering Committee was assisted in its task by ACIL Tasman Pty Ltd:

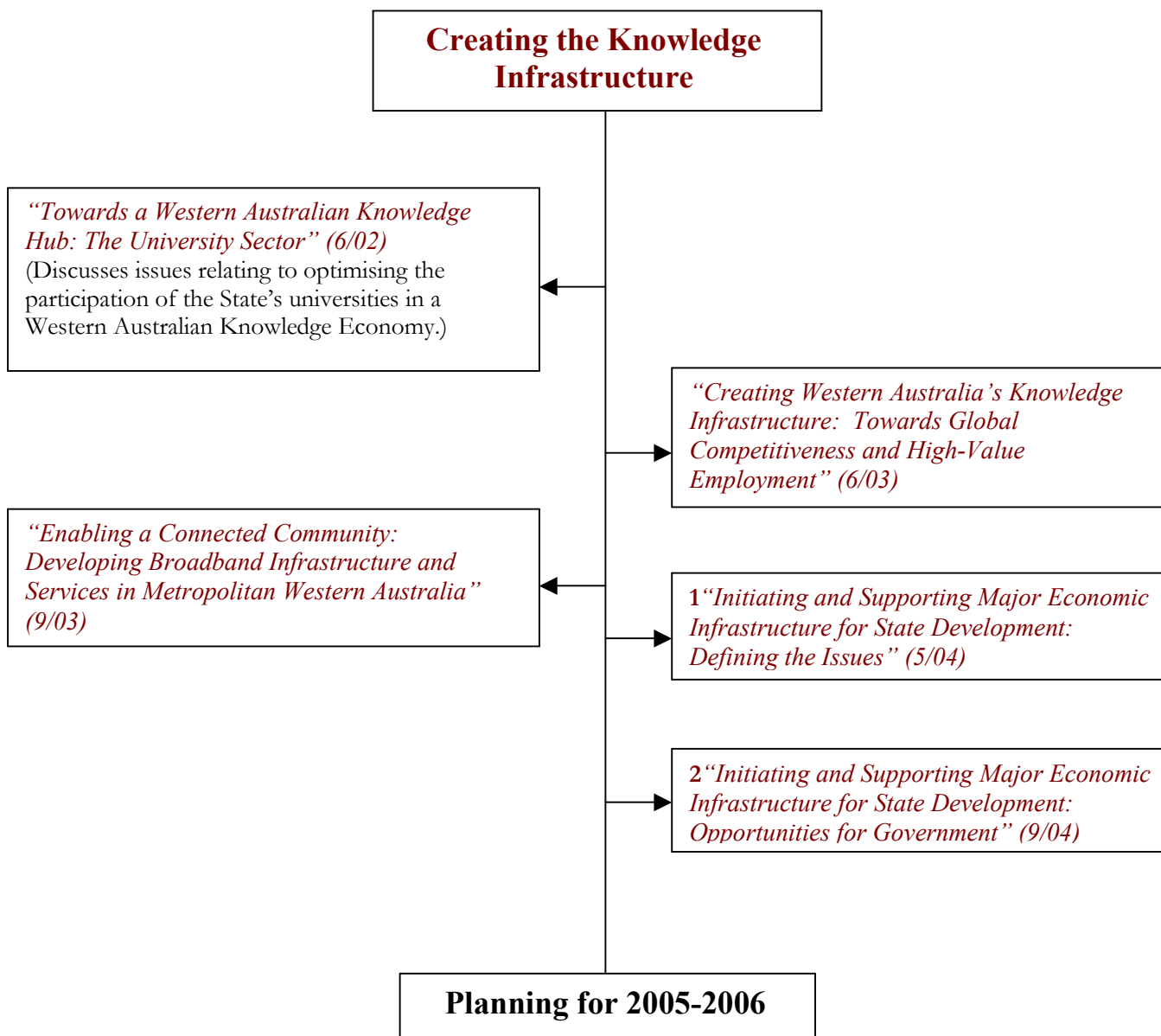
Mr John Roberts	Consultant
Ms Pauline Gately	Consultant

TIAC Executive Staff:

Mr Earl White	Executive Officer
Ms Deanna Fleming	Senior Policy Adviser
Ms Shelley Rush	Executive Assistant

E Towards a Western Australian Knowledge Economy 1999-Present





Copies of these reports can be obtained from our website: www.wa.gov.au/tiac

F Western Australian Technology and Industry Advisory Council

Background

The Western Australian Technology and Industry Advisory Council (TIAC) was created by legislation in 1987 (Technology Development Amendment Act - No. 32 of 1987) and was continued under Section 20 of the Industry and Technology Development Act 1998.

TIAC was preceded by the Technology Review Group 1978-83, and the Science, Industry and Technology Council (SITCO) 1983-87.

Council is made up of representatives from various sectors of the State's economy who, in terms of the relevant Act, use their varied background and experience to provide independent policy advice to the Minister so as to make a significant contribution to the development of strategies relating to the State's economic development.

Members of the Council are appointed by the Minister, under Section 22 of the Industry and Technology Development Act 1998 so as to be representative of the interests of the people of the State.

TIAC reports through the Minister to Parliament under Section 26(1) and Section 26(2) of the Industry and Technology Act 1998.

TIAC reports under the Financial Administration and Audit Act 1985 through the Department of Industry and Resources under Section 26(3) of the Industry and Technology Development Act 1998.

Objectives of the Industry and Technology Development Act 1998

The objectives of the Industry and Technology Development Act 1998 under Section 3 are to:

- (a) promote and foster the growth and development of industry, trade, science, technology and research in the State;
- (b) improve the efficiency of State industry and its ability to compete internationally;
- (c) encourage the establishment of new industry in the State;
- (d) encourage the broadening of the industrial base of the State; and
- (e) promote an environment which supports the development of industry, science and technology and the emergence of internationally competitive industries in the State.

Functions of the Western Australian Technology and Industry Advisory Council

The Council, under Section 21 of the Act is required to:

- (a) Provide advice to the Minister, at the initiative of the Council or at the request of the Minister, on any matter relating to the objects of the Industry and Technology Development Act 1998.
- (b) Carry out, collaborate in or produce research, studies or investigations on any matter relating to the objects of this Act, including matters relating to the:
 - (i) role of industry, science and technology in the policies of government;
 - (ii) social and economic impact of industrial and technological change;
 - (iii) employment and training needs and opportunities relating to industrial, scientific and technological activities in the State;
 - (iv) adequacy of, priorities among and co-ordination of, scientific, industrial and technological activities in the State;
 - (v) methods of stimulating desirable industrial and technological advances in the State;
 - (vi) application of industrial, scientific and technological advances to the services of the government; and
 - (vii) promotion of public awareness and understanding of development in industry, science and technology.

The Ministerial advice takes the form of reports and discussion papers which undergo a public consultation phase before submission to the Minister.

Participation on State Advisory and Funding Committees and Councils

Council has accepted invitations for representation and participated in:

- (a) The Federal Government's Commonwealth, State and Territory Advisory Council on Innovation;
- (b) The Federal Government's Innovation Festival Committee;
- (c) The Ministerial Education Export Advisory Committee;
- (d) The Information and Communication Technologies Strategic Advisory Group to the Department of Education and Training; and
- (e) The Centres of Excellence State Funding Advisory Committee of the Office of Science and Innovation.

Promotion and Public Awareness Raising Activities

Council's promotional and public awareness raising programs consist of two main types:

- (a) The 2020 Breakfast Seminars, commenced in 1990, are short, economic development focussed, information dissemination events.
- (b) TIAC's Internet website, to promote and increase the public awareness of its reports and encourage school students to participate in TIAC's virtual Science and Technology Forum. This activity is managed in conjunction with the Science Teachers' Association (STAWA) Talent Search Organisation.

Financial Provisions

The expenses of Council are provided for under Section 15 of the Industry and Technology Development Act 1998 via the Western Australian Industry and Technology Development Account.

Present Membership

Mr John Thompson
TIAC Chairman
Global Geochemistry Manager
SGS Minerals

Ms Wendy Newman
Principal Consultant
Quintessence Consultancy

Ms Sharon Brown
Strategic Business Manager
AlphaWest

Mr Graeme Rowley AM
Executive Director Operations
Fortescue Metals Group Limited

Dr Jim Limerick
Director General
Department of Industry and Resources

Ms Vivienne Snowden
Principal Consultant and Director
Snowden Mining Industry Consultants

Ms Stephanie Mayman
Secretary
UnionsWA

Professor Lance Twomey
Vice Chancellor
Curtin University of Technology

Mr Rob Meecham
Director of the Business Development Unit
Challenger TAFE

Mr Tim Ungar
Chairman
TSA Telco Group

Ms Catherine Moore
Global Services Centre Manager
Corporate IT Services
Rio Tinto



**PUBLIC COMMENT
REPLY SHEET**

TO: THE EXECUTIVE OFFICER
WESTERN AUSTRALIAN TECHNOLOGY AND INDUSTRY
ADVISORY COUNCIL

SUITE 3 ENTERPRISE UNIT 2
11 BRODIE HALL DRIVE
TECHNOLOGY PARK
BENTLEY WA 6102

TEL NO: (08) 9470 3666

FAX NO: (08) 9470 3558

FROM:

ADDRESS:

TEL NO: _____

FAX NO: _____

EMAIL: _____

NUMBER OF PAGES: _____

(including this cover sheet)

Comments on the Report entitled:

**TRADE IN WESTERN AUSTRALIAN HEALTH INDUSTRY SERVICES:
DIRECTIONS FOR DEVELOPMENT**

Closing Date: Thursday, 16 December 2004

(Please tear out and return with your comments.)