

A Comparative Study on the Service Profiles and Practice Facilities Among Urban General Practices in East and West Malaysia

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Summary

1171 urban general practices in East and West Malaysia were compared regarding their service profiles and practice facilities. In general, practices in both parts put important emphasis on preventive health care. More practices in East Malaysia were providing hormone replacement therapy and sexually transmitted diseases services but less were providing intrapartum care, counselling services including sexual and marital counselling and problems associated with social deviance such as alcohol and drug abuse. Although most practices in East Malaysia were solo practices, they were more comprehensive in terms of the provision of practice facilities when compared to those in West Malaysia. A greater number of them had ultrasound facilities, peak flow meters, ECG machines, computers and blood biochemistry facilities.

Key Words: General practice, Service profiles, Practice facilities

Introduction

General practices in different parts of the world are found to offer a wide range of services and facilities^{1,2}. In Malaysia, most general practices provide comprehensive services^{3,4,5}. East Malaysia comprising of Sabah and Sarawak occupies a land area that is nearly double that of West Malaysia, viz. all the states in Peninsular Malaysia. Generally, East Malaysia is predominantly rural. The doctor to population ratio in the East is less than that in the West. The government had developed village clinics to improve the country's rural health. However, in urban areas where most general practices are located, the geography, culture, and accessibility to secondary or tertiary care and patient demands vary in both East and West Malaysia. This might lead to a difference in service delivery and practice infrastructure. As general practitioners constituted more than half of the private doctors' workforce⁶, an understanding of

their health care provision would further facilitate health planning in our country. This study investigated the possible differences in service profiles and practice facilities among these urban general practices in East and West Malaysia.

Materials and Methods

This study was done using postal questionnaires. The questionnaire consisted of questions on service provision and practice facilities available in each practice. Questions on service profiles included provision of care in women's health, home visits, involvement in quit smoking programme, alcohol, drug abuse and HIV services, immunisations, well person checks, sexually transmitted disease (STD) services, counselling, minor surgical procedures, dispensary services, alternative therapy and regular health promotive screening. For

practice facilities, questions on provision of in-house investigations and equipment such as blood biochemistry, haematology, glucose, urine biochemistry, microscopy, culture & sensitivity, urine pregnancy test, X-rays, ultrasound, ECG machine, peak flow meter, nebuliser were asked. Most questions required a 'yes' and 'no' answer with a few having space for comments where appropriate.

The questionnaire was sent to general practices nationwide in Malaysia. The list of general practices was obtained from the *yellow pages* telephone directories for all states of Malaysia under the headings of "Clinics", "Medical Practitioners" and "Medical Practitioners-registered". Those practices that advertised themselves as specialists in other disciplines were excluded. Group practices with different addresses were regarded as a separate entity. All the practices on the list apart from those excluded as mentioned earlier were included in the study. These practices were located in urban areas according to the Malaysian Statistics Department's 1991 Census definition. It states that urban areas were gazetted areas with their adjoining built-up areas, which had a combined population of 10,000 or more at the time of the 1991 Census. Built-up areas were areas contiguous to a gazetted area and had at least 60 per cent of that population (aged 10 years or more) engaged in non-agricultural activities and at least 30 per cent of their housing units with modern toilet facilities.

2291 questionnaires (245 to East Malaysia and 2046 to West Malaysia) were mailed in November 1995. In May 1996, the questionnaires were sent again to the non-respondents. 368 replies (38 replies from East Malaysia and 330 replies from West Malaysia) were excluded because of incomplete entries or were duplicates. A total of 135 completed replies were obtained for East Malaysia and 1036 for West Malaysia. The response rate was thus 55% in East Malaysia and 51% in West Malaysia. An analysis was done on the difference in the rate of non-response between East and West Malaysia and it was found to be statistically insignificant (Chi-square=1.75; $p>0.18$). Chi-square tests and p-values were calculated using *Epi info Version 6* to compare the possible differences between East and West Malaysia.

Results

121 (90%) general practices in East Malaysia and 757 (73%) in West Malaysia were solo practices. There were significantly more solo practices in East Malaysia than West Malaysia ($p<0.0001$). Nearly all 134 (99%) practitioners surveyed in the East as compared to 963 (93%) practitioners in the West worked full time.

Service profile

(See Table I) Most practices in both East and West Malaysia provided antenatal and postnatal care, immunisations, well person checks, minor surgical procedures, home visits, dispensary services and regular health screening such as blood pressure measurements, weight/height measurements, cervical smear, breast examinations, glucose and cholesterol screening. There was no difference between these two parts of Malaysia in the provision of these services.

A greater proportion of practices in the East were providing hormone replacement therapy and STD services compared to their counterpart in the West. However, less than half of the practices on both sides were offering HIV services in terms of counselling and diagnosis.

Although most practices provided general counselling, only half of them offered marital and sexual counselling services. About one fifth of the practices did intrapartum care. General practices in East Malaysia were significantly less likely to provide intrapartum care and counselling on general matters, marital and sexual problems. They were also less inclined to deal with alcohol and problems of drug abuses.

Practice Facilities

(See Table II) A significantly higher number of practices in East Malaysia possessed computers, ultrasound scanners, ECG machines, peak flow meters and blood biochemistry as in house investigatory facilities.

Most practices in both parts had nebulisers and facilities for in house blood glucose, urine biochemistry and pregnancy test.

Table I
Comparing Provision of Service Profiles in East and West Malaysia

Services Provided	East Malaysia (n=135)	West Malaysia (n=1036)	Level of Significance
Antenatal care	111 (82%)	817 (79%)	NS
Postnatal care	101 (75%)	724 (70%)	NS
Intrapartum care	26 (19%)	282 (27%)	P<0.05
Home visits	107 (79%)	865 (83%)	NS
Dispensary	125 (93%)	906 (87%)	NS
Hormone replacement therapy	84 (62%)	487 (47%)	P<0.001
Immunisations	127 (94%)	985 (95%)	NS
Well person checks	131 (97%)	969 (94%)	NS
Sexually transmitted diseases	121 (90%)	751 (72%)	P<0.0001
Minor Surgery	129 (96%)	960 (93%)	NS
General Counselling	110 (81%)	910 (88%)	P<0.05
Marital Counselling	59 (44%)	559 (54%)	P<0.05
Sexual Counselling	70 (52%)	648 (63%)	P<0.05
HIV	57 (42%)	483 (47%)	NS
Quit smoking programme	51 (38%)	415 (40%)	NS
Alcohol problems	33 (24%)	352 (34%)	P<0.05
Drug abuse services	13 (10%)	249 (24%)	P<0.001
Acupuncture	6 (4%)	53 (5%)	NS
BP	132 (98%)	1016 (98%)	NS
Weight/Height	116 (86%)	915 (88%)	NS
Cervical smear	82 (61%)	571 (55%)	NS
Breast examination	75 (56%)	596 (58%)	NS
Glucose	112 (83%)	916 (88%)	NS
Cholesterol	97 (72%)	800 (77%)	NS

NS = non significant

Discussion

The list of general practices used was certainly not a complete list of all the general practices in Malaysia. It was based on self-selected telephone subscribers to the *Yellow Pages*, and therefore bias against those who were non-subscribers or who were ex-directory. However, this was chosen because it was the most comprehensive and unbiased list of general practices that could be obtained at the time.

The response rates for this survey were 55% and 51% for East and West Malaysia respectively. Since the response rate was lower than an ideal rate of 70% or above, a statistical test was done using Chi-square to investigate the difference in the rate of non-respondents between East and West Malaysia. The result showed that there was no statistically significant difference in the rate of non-response between these two groups. Although the information on age, gender, solo/group practices could not be ascertained from the telephone directory, any of

Table II
Comparing Provision of Practice Facilities in East and West Malaysia

In-house Facilities Available	East Malaysia (n=135)	West Malaysia (n=1036)	Level of Significance
Computer	80 (59%)	427 (41%)	P<0.0001
Blood Biochemistry	76 (56%)	460 (44%)	P<0.01
Blood Haematology	54 (40%)	350 (34%)	NS
Blood Glucose	127 (94%)	923 (89%)	NS
Urine Biochemistry	94 (70%)	672 (65%)	NS
Urine Microscopy	42 (31%)	334 (32%)	NS
Urine Culture & Sensitivity	8 (6%)	87 (8%)	NS
Urine Pregnancy Test	132 (98%)	994 (96%)	NS
X-rays	22 (16%)	181 (17%)	NS
Ultrasound	90 (67%)	394 (38%)	P<0.0001
ECG machine	111 (82%)	763 (74%)	P<0.05
Peak flow meter	79 (59%)	444 (43%)	P<0.001
Nebuliser	115 (85%)	855 (83%)	NS

NS = non significant

these possible non-response bias would have applied likewise to both groups. Hence, the data obtained from this survey was valid for this comparative study.

From the results obtained, practices in both East and West Malaysia were heavily involved in the reported provision of preventive services. Nearly all practices were involved in blood pressure screening, and the cervical cancer and cholesterol screening rates were higher than those of the European practices (mean 98% vs. 78%; 56% vs. 48%; 77% vs. 38% respectively). In addition, more practices in the East were involved in providing hormone replacement therapy. This was encouraging and revealed the general practices in Malaysia were interested in implementing preventive health care, which is the health goal and target for the year 2000.

Generally, the provision of specific counselling such as marital and sexual counselling, alcohol and drug abuses services were low among the general practices. The provision of these services was significantly much lower in East Malaysian practices than the West. The lack of

involvement of general practices in East Malaysia in counselling could be due to time constraints as most of them were solo practices and counselling was generally time consuming. The other factor could be due to lack of exposure and training and hence confidence in handling psychosocial and emotional problems. Psychosocial problems contributed to the burden of illnesses in the community and yet remained largely undiagnosed and uncovered. A survey done in Pahang had revealed that only 1% of the illnesses seen in the practices were psychoemotional problems as compared to 8% in the United Kingdom⁸. Primary care physicians are in the forefront to provide comprehensive and whole person care to the community. Counselling is an inseparable part of a consultation. It certainly plays an important role in patient management and can improve the doctor patient relationship. It may take more time but a holistic approach demands investment of a doctor's time. Time spent on counselling is time well spent. As the population becomes more health conscious, they can be counselled to make an informed decision on their own health care. This will improve the standard of health care of the country. More emphasis can be placed

in training the practitioners through workshops and seminars in these areas, both for the practices in the East and the West to enhance the quality of care provided.

More practices in East Malaysia were providing STD services than the West. This could be due to higher demand from the patients in terms of accessibility when compared to hospitals or health centres. Despite most practices providing STD services, less than half of them were offering HIV services. As the HIV problem was on the increase in the country, more practices could consider offering such services to the community in need.

Ultrasound has been used at an increasing rate for diagnostic purposes in developed and in many developing countries. It is considered essential to good patient care but the usefulness depends largely on the skill and experience of the operator^{9,10}. According to the WHO, in developing countries about 70% of the population did not have access to ultrasound diagnostic services⁹. Urban general practices in East Malaysia had stood out in terms of the provision of in-house equipment especially the possession of ultrasound facilities which was nearly double that of the practices in West Malaysia. Despite most practices in East Malaysia being solo practices, they were willing to invest in medical technology. This would certainly create patient convenience and reduce hospital workload. In return the doctors could also enjoy better job satisfaction.

Although more practices in East Malaysia had ultrasound facilities, less of them were providing intrapartum care compared to those in the West. Most ultrasound scans were performed for antenatal checks, and for abdominal and gynaecological problems³. In East Malaysia, the second most common cause of death in government hospital for all ages was due to conditions originating in the perinatal period whereas in West Malaysia, perinatal problem was not in the list of the five principal causes of death¹¹. The higher risk of being involved in medico-legal problems associated with obstetric practices and time constraints could be contributing factors for the practices in East Malaysia not to participate and undertake intrapartum care. Moreover, the trend for practices in other countries seemed to be moving away from obstetric care¹².

Intrapartum care is shifting back to the hospitals where better facilities and equipment are available to deal with emergencies.

About 60% of urban general practices in East Malaysia had a computer. This is higher than the national mean of 43%³ whereas the computerisation rate in West Malaysian practices is about the same as national mean. The higher computerisation rate in East Malaysia could be attributed to difficulty in accessing resources in continuing medical education due to distance and the computer provided a good alternative source of medical online information and resources. It also helped the solo practices with the practice's business applications e.g. finances, billing and drug stock checks. In some countries, the use of computers has been shown to have improved immunisation rates by 8 - 18% and other preventive tasks by up to 50%¹³. More practices should be encouraged to apply computer use in medical records and clinical work. The government could also give tax incentive to practices to encourage usage of computers as computing is seen as an essential technology in future health care.

More practices in East Malaysia had peak flow meters and ECG machines. Peak flow meter is a simple and cheap device, which contribute significantly to the monitoring and well being of asthmatic patients. Both equipment should be regarded as essential equipment for each practice to have and to use in patient management.

No medical infrastructure is complete without pathological laboratory services. A study on urban practices in Penang had shown that 10% of their patients needed laboratory investigations¹⁴. Most practitioners sent the investigations to private laboratories. However, having in-house investigations meant immediate availability of results and convenience to patients. In this study, there was no difference among the practices in the East and the West of Malaysia in the provision of in-house blood and urinary investigatory facilities except blood biochemistry where more practices in East Malaysia were providing such facility.

In future, further research could concentrate on assessing the factors that influence general practitioner's decisions to provide certain services and facilities and the amount

to provide. This would help the health planner design more appropriate incentives for them and thereby improving the health facilities in the country.

Conclusion

General practices in both East and West Malaysia put important emphasis on preventive health care. However, fewer practices in East Malaysia were providing counselling and services associated with social deviance and psychoemotional problems when compared to those in West Malaysia. Perhaps it is time that more practices in the East could be encouraged to get involved in the aspects of psychosocial well being of a patient. Although more practices in East Malaysia were solo, they were investing in medical technologies and were more comprehensive in terms of the provision of practice

facilities. The practices in West Malaysia could probably invest and develop more technical facilities and support such as ultrasound, computer, ECG machine and simple monitoring device such as a peak flow meter. Any opportunities to experiment with new services and facilities will help to identify those most suited for provision in primary care.

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