

CHAPTER IV

AN IDEAL PRODUCT PORTFOLIO

THE PRODUCT PORTFOLIOS OF THE MAJOR LOCAL PHARMACEUTICAL COMPANIES

The product portfolios of the seven local pharmaceutical organisations are shown in Table 3. The data shows the number of products under each therapeutic category for each of the local pharmaceutical manufacturers.

Table 3 : Product Portfolios of Seven Local Pharmaceutical Companies

Category	Number of Products						
	Ranbaxy	Pharm-malaysia	Hovid	Setron	Upha	Xepa	YSP
Cardiovascular	0	5	11	3	25	4	6
Alimentary / Metabolism	4	5	16	14	16	10	8
Central Nervous System	7	20	17	13	46	22	10
Anti-infectives	35	37	33	23	51	14	12
Respiratory	3	8	23	21	29	23	6
Musculoskeletal	2	4	15	4	10	6	4
Dermatologicals	1	13	20	7	19	25	6
Sensory Organs	1	1	0	0	24	8	0
Hormones	0	2	3	2	5	3	3
Vitamins	4	19	21	8	30	6	0
Total	57	114	160	95	257	121	55

In order to illustrate the composition of the portfolio of each company, the number of products under each category are presented as a percentage of the total number of products as shown in Table 4. The table also shows the average product portfolio of the sample taken.

Table 4 : Average Product Portfolio of Seven Local Pharmaceutical Companies (in percentage).

Category	Ranbaxy	Pharmmalaysia	Hovid	Setron	Upha	Xepa	YSP	Average
Cardiovascular	0	4.3	6.9	3.2	9.7	3.2	10.9	5.5
Alimentary / Metabolism	7	4.3	10	14.7	6.2	8.2	14.5	9.3
Central Nervous System	12.3	17.5	10.6	13.7	17.9	18	18.2	15.5
Anti-infectives	61.4	32.5	20.6	24.2	19.8	11.5	21.8	27.4
Respiratory	5.3	7	14.4	22.1	11.3	18.9	10.9	12.8
Musculoskeletal	3.5	3.5	9.4	4.2	3.9	5	7.3	5.3
Dermatologicals	1.8	11.4	12.5	7.4	7.4	20.7	10.9	10.3
Sensory Organs	1.8	0.9	0	0	9.3	6.6	0	3.4
Hormones	0	1.8	1.9	2.1	1.9	2.5	5.5	2.2
Vitamins	7	17.7	13.1	8.4	11.7	5	0	8.9

All the seven local pharmaceutical companies have different number of products in the different therapeutic categories of their portfolios. Ranbaxy has 61% of its products in the anti-infectives category, which is the highest number among all the seven companies and has no products in the cardiovascular and hormone categories. Pharmmalaysia on the other hand, has 17.7% of its products in the vitamin category, the highest in the sample and an above average number of products in the anti-infectives, central nervous system and dermatologicals categories. Hovid has the highest of 9.4% of its total products in the musculoskeletal category while the percentage of products in the respiratory, vitamins, dermatologicals alimentary/metabolism, and cardiovascular categories are all above their respective sample averages. It has no products in the sensory organ category.

Setron has 22.1% of its products in the respiratory category and 14.7% in the alimentary/metabolism category, both being the highest in the sample selected. It also has no products in the sensory organ category. Upha has an above

average number of products in the central nervous system, vitamins and cardiovascular categories; and 9.3% of its products in the sensory organs category which is not only the highest among the seven local companies but is 2.5 times that of the sample average. Xepa's portfolio has products in the central nervous system respiratory and sensory organs categories that are higher than the corresponding sample averages with its dermatologicals category having 20.7%, the highest in the sample average. YSP has 7.1% of its products in the cardiovascular category and 18.2% in the central nervous system category, both being the highest in the sample of the seven local companies. Its portfolio also has an above average percentage of products in the muscular, alimentary/metabolism, dermatologicals and hormones categories and no products in the vitamins and sensory organs categories.

Figure 4 : Average Product Portfolio of Local Manufacturers

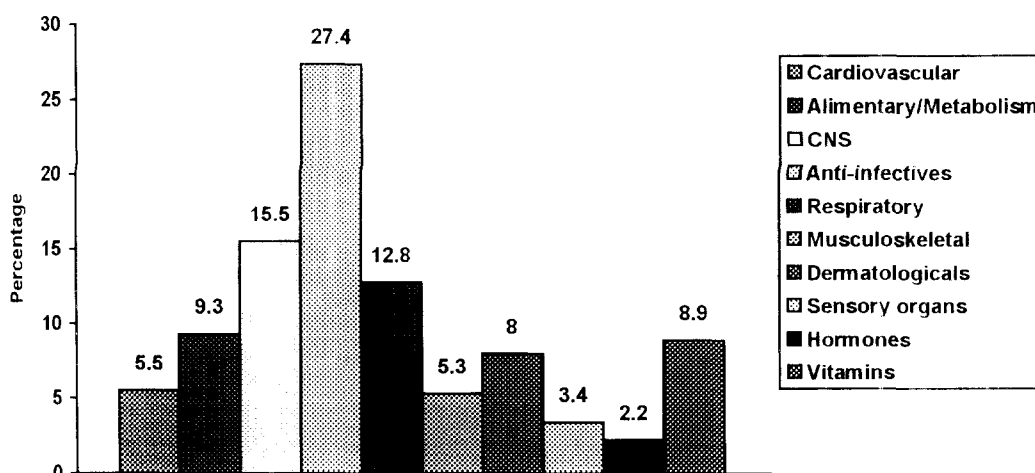


Figure 4 shows the average product portfolio of the sample of the seven local manufacturers in a bar chart. The data in both Table 4 and Figure 4 show that most of the manufacturers have mainly focused on the anti-infectives (27.4%), the central nervous system (15.5%) and the respiratory (12.8%) therapeutic categories of products. The other major categories being alimentary/metabolism, vitamins and dermatologicals. The least priority is given to the cardiovascular, musculoskeletal, sensory organ and hormones categories.

The portfolios of the local pharmaceutical companies discussed are based on the number of products under each category and not on market shares and growth rates, thus making it impossible to comment whether the existing portfolio of the sample selected is ideal at this stage. However, the existing portfolio of the local manufacturers consists of a good number of products in important therapeutic categories, namely :

1. Anti-infectives	27.4%
2. Central Nervous System	15.5%
3. Respiratory	12.8%
4. <i>Alimentary / Metabolism</i>	9.3%
5. Vitamins & Minerals	8.9%
6. Dermatologicals	8%

SALES TRENDS OF THERAPEUTIC CATEGORIES (PRODUCTS) OF PHARMACEUTICAL COMPANIES IN MALAYSIA

Malaysian Pharmaceutical Industry (private sector)

The top five therapeutic classes with the biggest market share for the Malaysian pharmaceutical industry for 1994 are shown in Table 5.

Table 5 : Top five therapeutic classes of Pharmaceutical Products in Peninsular Malaysia, 1994.

Therapeutic class	RM (millions)	Percentage growth in 1994
Penicillins	18.9	17
Non-narcotics & analgesics	14.9	11
Antiulcerants	13.5	14
Cephalosporins	12.9	12
Pure vaccines	11.5	-9

Source : IMS Newsletter, March 1995

The data provided by IMS in its newsletter, although insufficient, help in validating previous observation in the analysis of the product portfolios of the local pharmaceutical companies that companies with the largest number of products such as the anti-infectives category have the largest market share. The therapeutic classes of penicillins (anti-infectives) and cephalosporins (anti-infectives) that constitutes 80% of anti-infective products, have exhibited in 1994 not only the largest market share but also the highest growth rates.

The non-narcotics and analgesics which are a major subcategory of the central nervous system had a large market share recorded a high growth rate. Anti-ulcerants, a subcategory of the alimentary also exhibited a large market share with a high growth rate. Thus an ideal product portfolio for a local

pharmaceutical company should have anti-infectives, central nervous system and alimentary products, since all the three therapeutic categories exhibited large market shares and high growth rates (stars).

Multinational Pharmaceutical Companies in Malaysia

The growth rates and market share of each therapeutic category (products) of 32 participating multinational pharmaceutical companies were calculated in percentage, to determine their market performance as shown in Table 6.

Table 6 : Annual Turnover of Multinational Pharmaceutical Companies in Malaysia, 1991 - 1993

Diseases	1991 (RM'000)	1992 (RM'000)	1993 (RM'000)	Percentage growth rate 1991-1992	Percentage growth rate 1992-1993	Market share (%)
Alimentary	34,592	31,384	33,425	9.3	6.5	9.8
Cardio-vascular	29,318	35,454	33,105	20.9	-6.6	9.7
Respiratory	26,513	28,721	42,917	8.3	49.4	12.6
Neuro-muscular	30,751	36,482	43,255	18.3	18.6	12.7
Endocrine	5,396	7,055	7,227	30.7	2.4	2.1
Contra-ceptives	378	531	654	40.5	23.2	0.2
Anti-infectives	58,016	59,631	69,811	2.8	17.1	20.5
Genito-urinary	3,583	4,356	4,438	21.6	1.9	1.3
Metabolism	7,313	11,053	13,948	51.1	26.2	4
Vitamins & Minerals	19,084	22,906	28,184	20	23	8
Eye, Ear, Mouth/Throat	7,597	5,585	10,199	-26.5	82.6	3
Dermatologicals	17,050	19,492	22,440	14.3	15.1	6.6
Anesthetics	1,253	2,008	3,239	60.2	61.3	0.9
Radiological agents	863	1,073	985	24.3	-8.2	2.9
Vaccines & Blood derivatives	14,468	15,627	15,742	8	0.7	4.6
Intravenous solutions	149	311	294	108.7	-5.5	0.1
Antidotes & Detoxifying agents	177	253	222	42.9	-12.3	0.07
Miscellaneous	1,403	1,430	2,691	1.9	88.2	0.8
TOTAL	262,484	291,554	341,175	11.07	17	100

Source - MPTMA 20th Turnover Survey of Pharmaceutical Business 1994, Basic Industry Data

Anti-infectives had the largest market share of 20.5% while its growth rate jumped from a mere 2.8% in 1992 to 17.1% in 1993. Products used in neuromuscular conditions had 12.7% market share with a consistent growth rate of 18.3% in 1992 and 18.6% in 1993. Respiratory segment exhibited 12.6% market share and consistent growth rates of 18.3% in 1992 and 18.6% in 1993. With a 9.8% market share, the alimentary segment declined to -9.3% growth rate in 1992 and subsequently recorded an increase of 6.5% in 1993. The cardiovascular class showed 9.7% market share with a good growth rate of 20.9% in 1992 which dropped to -6.6% in 1993. Vitamins and minerals category also comprised of a significant 8.3% market share, registering high and consistent growth rates of 20% in 1992 and 23% in 1993. Finally dermatologicals category with a market share of 6.6% maintained consistently high growth rates of 14.3% in 1992 and 15.1% in 1993.

A vital observation would include two fast growing product categories namely metabolism and sensory organs (eye, ear mouth/throat). Metabolism category had a low market share of 4% with a very high growth rate of 51.1% in 1992 that fell to 26.2% in 1993, while the sensory organs category also had a low a market share of 3% registered -26.5% in 1992 growth rate that jumped to 82.6% in 1993.

In 1992 the cardiovascular, neuromuscular, endocrine, contraceptives, genitourinary, metabolism, vitamins and minerals, dermatologicals, anesthetics,

radiological agents, intravenous solutions and antidotes and detoxifying agents categories showed high growth rates (more than 10%). Whereas in 1993 products that exhibited high growth rates were respiratory, neuromuscular, contraceptives, anti-infectives, metabolism, sensory organs, dermatologicals and anesthetics categories. Out of which only anti-infectives, neuromuscular, respiratory, alimentary, cardiovascular, vitamins and minerals and dermatologicals categories had market shares of more than 5% in 1993.

Thus the most prominent categories which exhibited large market share with their corresponding growth rates are shown in Table 7 :

Table 7 : Therapeutic Categories with Large Market Share and Growth Rates of Multinational Pharmaceutical Companies in Malaysia in 1993.

RANK	THERAPEUTIC CATEGORY	PERCENTAGE MARKET SHARE	PERCENTAGE GROWTH RATE
1	Anti-infectives	20.5	17.1
2	Neuromuscular	12.7	18.6
3	Respiratory	12.6	49.4
4	Alimentary	9.8	6.5
5	Cardiovascular	9.7	-6.6
6	Vitamins & Minerals	8.3	23
7	Dermatologicals	6.6	15.1

The therapeutic categories in the table represent stars and cash cows of the multinational pharmaceutical companies in Malaysia and thus are perfect candidates to be included in an ideal product portfolio. In addition the metabolism and sensory organs categories that represent children are also ideal products for the portfolio of a local pharmaceutical company. A comparison with the average sample product portfolio of the local pharmaceutical companies shows that the number of products in percentage in each therapeutic category

follow exactly the same sequence as that of the multinational companies except for the cardiovascular category which comes immediately after dermatologicals. Hence an ideal product portfolio for a local pharmaceutical organisation should comprise of anti-infectives, neuromuscular, respiratory, alimentary, cardiovascular, vitamins and minerals dermatologicals, metabolism and sensory organs therapeutic categories.

DISEASE PATTERNS IN MALAYSIA

Table 8 shows the principal causes of hospitalization and the number of cases hospitalized in the government hospitals for each disease category between 1990 and 1994. As evident, heart disease and diseases of pulmonary circulation are the most predominant causes of hospitalization in Malaysia, followed by cerebrovascular (CNS), malignant neoplasm (cancer), septicaemia (infection of the blood), urinary diseases (nephritis, nephrotic syndrome and nephrosis) and finally pneumonia (lung infection).

Table 8 : Hospitalization in Government Hospitals 1990 -1994

Diseases	Number of Cases Hospitalized				
	1990	1991	1992	1993	1994
Circulatory system	78800	80377	82010	83860	89824
Respiratory system	87865	82311	83127	85886	89403
Digestive system	71453	69269	66545	676972	68115
Intestinal infection	49310	43772	NA	38970	NA
Urinary system	30337	30529	28691	29655	32135

Note : NA denotes Not Available

Source : Information and Documentation Unit, Ministry of Health.

The major causes of mortality are in tandem with the main causes of hospitalization as seen in Table 9. Heart and Respiratory diseases have been the major cause of deaths since 1990 till 1994, followed by cerebrovascular disease (CNS and blood related), malignant neoplasm (cancer), septicæmia, urinary disease and pneumonia.

Table 9 : Deaths in Government Hospitals 1990 -1994

Diseases	Number of Cases of Deaths				
	1990	1991	1992	1993	1994
Heart disease & disease of Pulmonary circulation	4175	4146	3967	3873	4038
Cerebrovascular disease	2257	2183	2416	2338	2490
Malignant neoplasm	2224	2196	2178	2234	2314
Septicæmia	1922	2171	2386	2340	2411
Nephritis, Nephrotic syndrome & Nephrosis	817	825	926	882	953

Source : Information and Documentation Unit, Ministry of Health

Pharmaceutical companies both multinational and local, develop and market products targeted at diseases which are the primary causes of morbidity and mortality in a country. Information regarding the number of cases of hospitalisation and deaths due to certain diseases provide insight to drugs that are indispensable to treat these patients. Thus products that treat these diseases in government hospitals are constantly included in the product portfolios of pharmaceutical companies due to a positive relationship between drugs and diseases. Greater the number cases of deaths/hospitalisation for particular diseases, greater would be the need for drugs used to treat these diseases.

Thus an ideal portfolio for a local pharmaceutical company should have products that are targeted to cardiovascular, respiratory, alimentary, central nervous system, infections and cancer. Drawing comparison with the therapeutic categories identified as suitable for an ideal product portfolio from the sales trends of pharmaceutical companies in Malaysia, the disease trends also indicate that all the first five categories would form an ideal portfolio for a local pharmaceutical company. Furthermore, products that treat cancer should also be given consideration, due to the high increase in the number of cancer patients and also due to annual increase in the deaths of cancer patients

SALES TRENDS OF PHARMACEUTICAL PRODUCTS IN THE WORLD MARKET

Table 10 shows sales of pharmaceuticals to patients at retail pharmacies worldwide. The sales figures represent prescription filled at pharmacies and IMS International, an established pharmaceutical consultancy firm which has been the leading organisation monitoring sales of pharmaceutical products in the world.

The cardiovascular segment has the largest market share of 18.1% and exhibits a low growth rate (cash cow) of 5%. Likewise alimentary/metabolism category (cash cow) also has a high market share of 17% with a low growth of 6%. However the central nervous system (12.9% market share and 12% growth rate), anti-infectives (10.4% market share and 13% growth rate), and respiratory (13%

market share and 14% growth rate) categories represents typical stars. The highest growth rate of 14% was exhibited by respiratory segment

Table 10 : World Pharmaceutical Sales at Retail Pharmacies January - October 1995

THERAPEUTIC CATEGORY	JAN-OCT 1995 (US\$ MILLION)	JAN-OCT 1994 (US\$ MILLION)	PERCENTAGE GROWTH RATE (%)	MARKET SHARE (%)
Cardiovascular	20,632	18,575	5	18.1
Alimentary /metabolism	19,426	17,400	6	17
Central Nervous System	14,752	12,677	12	12.9
Anti-infectives	11,884	9,938	13	10.4
Respiratory	11,523	9,622	14	10.1
Blood Agents	6,407	5,378	12	5.6
Musculo-skeletal	6,361	5,714	4	5.6
Genito-urinary	5,803	5,110	9	5.1
Dermatologicals	5,329	4,871	4	4.7
Cytostatics	2,986	2,610	8	2.6
Sensory Organs	2,785	2,371	12	2.4
Miscellaneous	2,532	2,227	8	2.2
Hormones	1,782	1,535	8	1.6
Diagnostic Agents	1,396	1,170	13	1.2
Hospital Solutions	531	473	1	0.5
Parasitology	203	174	10	0.2

Source : IMS International

Drugs classified as cardiovascular, alimentary/metabolism central nervous system, anti-infectives and respiratory comprised of major market segments since they have market shares of 10% or more and are stars/cash cows of the world pharmaceutical companies. The categories that also recorded high growth rates were blood agents, sensory organs, diagnostic agents and parasitology. However both diagnostic agents and parasitology categories have negligible market shares.

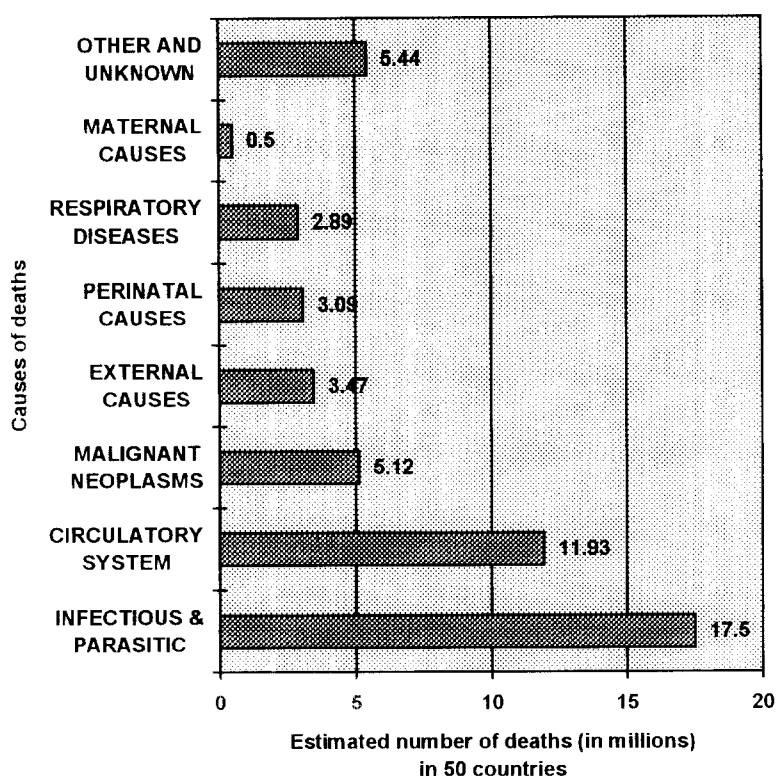
Musculoskeletal, dermatologicals, cytostatics and sensory organs categories are attractive market segments since they either have market shares of 5% (metabolism and dermatologicals) or growth rates of 8% and above (cytostatics and sensory organs). Thus they are perfect products for an ideal product portfolio of a local pharmaceutical company. Keeping in mind the world pharmaceutical sales trend, an ideal product portfolio for a local pharmaceutical company would include cardiovascular, alimentary/metabolism, central nervous system, anti-infectives, respiratory, musculo-skeletal, dermatologicals, sensory organs and cytostatics.

DISEASE PATTERNS IN THE WORLD

The World Health Organization has identified the estimated annual number and major causes of deaths in the world as illustrated in a bar chart in Figure 5. It has shortlisted the most significant expected causes of mortality and morbidity in the world in the following order of severity :

1. Infectious and parasitic diseases
2. Cardiovascular diseases
3. Cancer
4. External causes such as accidents at work, technological disasters, and traffic accidents.
5. Perinatal (infant and child)
6. Respiratory diseases such as asthma and tuberculosis
7. Mental illness

Figure 5 : ESTIMATED ANNUAL NUMBER OF DEATHS BY CAUSE IN THE DEVELOPING AND DEVELOPED COUNTRIES, 1990



Source : Renewing the Health-for-all strategy - WHO 1995

Causes of deaths gives one an indication of the diseases that cannot be completely cured by drugs such as high blood pressure, diabetes asthma, cancer and epilepsy. Drugs used in the disease conditions are used on a long term basis and in most cases life-long. Thus drugs that treat such diseases would always have a ready and attractive market. Hence an ideal product portfolio designed for a local pharmaceutical company should have products that treat such diseases and which causes high rates of morbidity and mortality world-wide. Products, thus to be included in an ideal portfolio are in the anti-infectives, cardiovascular, cancer and respiratory categories.

TRENDS IN THERAPEUTIC CATEGORIES

The multinational pharmaceutical companies represent 70% of the total Malaysian pharmaceutical market. Hence performance of their therapeutic categories reflect the overall market and also provides clues as to what an ideal product portfolio should constitute. Taking into consideration the above, the therapeutic categories of the multinational pharmaceutical companies in Malaysia that would constitute an ideal product portfolio are anti-infectives, neuromuscular, respiratory, alimentary, cardiovascular, vitamins and minerals, dermatologicals, metabolism and sensory organs. Looking from a Malaysian point of view of the principal disease causes of hospitalisation and deaths, an ideal product portfolio for a local pharmaceutical company should also include the cytostatic category of products. The portfolio of the local companies on the other hand have a high percentage of products in the anti-infectives, central nervous system, respiratory, alimentary/metabolism, vitamins and minerals and dermatologicals categories. The categories neglected by most of them are cardiovascular, musculo-skeletal, sensory organs and cytostatics.

The therapeutic categories of the world drug sales can be classified as :

1. Stars : Central Nervous System, Anti-infectives, and Respiratory.
2. Cash cows : Cardiovascular and Alimentary/metabolism
3. Child : Genito-urinary, Cytostatics, Sensory Organs, Hormones, Diagnostic Agents and Parasitology.
4. Dog : Musculoskeletal and Dermatologicals.

Products that would constitute an ideal product portfolio from the global point of view would be identical to that developed using the Malaysian scenario as discussed during analysis of the world pharmaceutical sales except for the vitamins and minerals category. Vitamins and minerals are classified as Over-the-Counter drugs (refer Table 1) in world pharmaceutical sales by PMSI and IMS International. They are easily obtained from stores without the need to produce a prescription and are normally used for self-medication. In Malaysia, however vitamins and minerals are generally classified under pharmaceuticals. The Over-the-Counter which includes vitamins and minerals category has a consistent growth rate in excess of 9% worldwide (9.9% in 1993 and 9.7% in 1994) and a substantial 10.2% market share of the total world pharmaceuticals turnover that more than justifies its inclusion in the ideal product portfolio proposed.

AN IDEAL PRODUCT PORTFOLIO FOR A LOCAL PHARMACEUTICAL COMPANY IN MALAYSIA

Successfully marketed products by multinational pharmaceutical organisations provide ready markets for generic companies, once patents of their products expire. Innovative products that have a large market share and high growth rates, large market share with low growth rates are ideal candidates for development by local pharmaceutical organisations. Also products with a low-medium market share with excellent growth rates provide incentives to local pharmaceutical organisations to develop and market, since they provide growth

potential in niche markets. An unbalanced portfolio would have too many dogs or problem children and / or too few stars and cash cows.

Thus the situational analysis concludes that an ideal portfolio would comprise of products in the following order of importance :

1. Anti-infectives
2. Neuromuscular
3. Respiratory
4. Alimentary
5. Cardiovascular
6. Vitamins and minerals
7. Dermatologicals
8. Metabolism
9. Sensory Organs
10. Cytostatics

Anti-infectives

Products in this category have the highest priority in an ideal product portfolio of a local pharmaceutical company due to several reasons. The highest percentage of products in the average sample product portfolio consists of anti-infectives (27.4%). More than 50% of the sample of seven local pharmaceutical companies had higher than average percentage of anti-infective products in their portfolios. Ranbaxy had the highest of 61.4% of its products in the anti-infectives category.

Sales analysis of the multinational pharmaceutical companies in Malaysia exhibited an identical trend. Its anti-infectives category recorded the largest market share of 20.5% with an equally high growth rate of 17.1% in 1993. But in the world market anti-infectives category had a 10.4% market share (the fourth largest) with a growth rate of 13% (the second highest). The World Health Organization has estimated that infections would take the highest annual toll of 17.5 million patients from 1995 to the year 2000.

Since the study is mainly geared to the a Malaysian industry and figures of the multinational pharmaceutical companies in Malaysia provides sufficient data to substantiate that anti-infectives would be the most significant therapeutic category for the local pharmaceutical companies.

Neuromuscular

Products under this category combine both products in the central nervous system and musculo-skeletal. The reason being mainly that they are inter-related, the sales turnover of the multinational pharmaceutical companies in Malaysia uses neuromuscular in their therapeutic classification of drugs and it facilitates comparison and analysis. The central nervous system category ranked number two (15.5%) in the sample average of the local pharmaceutical companies' product portfolios. More than 50% of the sample of seven local companies had products in the central nervous system category higher than the sample average with YSP having 18.2% the highest in this category. In the case of musculo-skeletal products, sample average was 5.3% with Hovid having the

highest of 9.4% of its products in this category. On combining both the categories, the neuromuscular category sample average adds up to 20.8% which still makes it second to the anti-infectives category.

The sales analysis of the multinational pharmaceutical companies in Malaysia also had the neuromuscular category in the second place. It registered a 12.7% market share with a growth rate of 18.6%. In the world market the central nervous system category stood at the third place with a market share of 12.9% and a high growth rate of 12%. The musculoskeletal had a market share of 5.6% with a low growth rate of 4%. Combining both the categories for the world pharmaceutical sales would give the neuromuscular category the highest market share. Since the ideal product portfolio is developed for the Malaysian market, the neuromuscular ranks number two in the ideal product portfolio for the local pharmaceutical companies.

Respiratory

The percentage of the respiratory products in the sample average of the local pharmaceutical companies is 12.8%, the third in the average sample portfolio. Setron had 22.1%, the highest percentage of products in the respiratory category. In the portfolios of the multinational pharmaceutical companies in Malaysia, the respiratory products also ranked number three recording a market share of 12.6% and a very high growth rate of 49.4% in 1993. Respiratory

disease is the second major cause of hospitalisation of patients in the government hospitals in Malaysia. The world pharmaceutical sales listed the respiratory category as number four basis the market share of 10.1%, but it recorded the highest growth rate of 14%. The estimated deaths due to respiratory disease is 2.9 million annually as claimed by the World Health Organization. Thus the respiratory category stands at number three in the ideal product portfolio of the local pharmaceutical companies in Malaysia.

Alimentary

The alimentary and metabolism have been combined in the product portfolio of the local companies during the analysis, due to the insignificant number of products in the metabolism category. And yet the alimentary/metabolism category had the fourth highest percentage of products in the average sample portfolio of the local companies with Setron having 14.7%, the highest percentage of its products in this categories. The alimentary category in the product portfolio of the multinational companies in Malaysia ranked number four with a market share of 9.8% and a growth rate of 6.5%. The third largest number of cases hospitalised in the government hospitals in Malaysia are due to diseases of the alimentary tract or digestive system. The world pharmaceutical sales ranked the alimentary/metabolism category as number two. Its market share being 17% and growth rate a mere 6%. Thus, taking a Malaysian perspective, the alimentary category ranks number four in the ideal product portfolio for a local pharmaceutical company.

Cardiovascular

The cardiovascular category ranked number seven in the average sample product portfolio of the local companies. YSP has 10.9%, the highest percentage of products in its portfolio compared to 5.5%, the sample average of the cardiovascular category. In the product portfolio of the multinational companies in Malaysia the cardiovascular category ranks number five basis annual turnover with a market share of 9.7% and a declining growth rate of -6.6%. The number one cause of hospitalisation (89824 in 1994) and deaths (4038 in 1994) in the Malaysian government hospitals is due to heart disease which is also true for the entire world (estimated annual deaths are 12 million patients). For the world pharmaceutical sales the cardiovascular category had 18.1%, the highest market share and a low growth rate of 5%. Since the study is being done for a Malaysian company, the cardiovascular category would take the fifth place in an ideal product portfolio.

Vitamins and minerals

The current portfolios of the local companies have a sample average of 8.9% for the vitamins and minerals category. Pharmmalaysia had the highest percentage of 17.7% against the sample average of 8.9, which is nearly double. The vitamins and minerals category ranked number five in the average sample portfolios of the local companies. In the case of the multinational companies in Malaysia, it ranked number six, capturing a market share of 8.3% and exhibited a high growth rate of 23%. Vitamins which are classified under the over-the-

counter medicines in the world pharmaceutical market. It constitutes a major percentage of Over-the-counter medicines, which had a market share of 10% and consistent growth rates of 9.9% in 1993 and 9.7% in 1994. Thus vitamins and minerals category is ranked as number six in the ideal product portfolio of a local pharmaceutical company.

Dermatologicals

This category ranked number six in the average sample product portfolios of the local companies. Xepa had the highest percentage of 20.7% which is twice the sample average for dermatologicals (10.3%). Dermatologicals category has been ranked as number seven in the multinational companies in Malaysia. It registered a market share of 6.6% with a high growth rate of 15.1% in 1993. The dermatologicals category in the world pharmaceutical market had a market share of 4.7% and a growth rate of only 4%. Considering a Malaysian view, the dermatologicals category is ranked as number seven in the ideal product portfolio of a local pharmaceutical company.

Metabolism, sensory organs and cytostatics

All the three categories are ranked eight, nine and ten in the ideal product portfolio for a matter of convenience since all the three has the least importance compared the first seven. All the three categories present reasonably good market potential. There are no cytostatic products in the existing portfolios of the local companies whereas it had a market share of 2.9% and a growth rate of -

8.2% in 1993 and 24.3% in 1992 in the product portfolios of the Malaysian multinational pharmaceutical companies. In Malaysia as well as in the world, cancer is the number three cause of annual mortality. About 5.12 million patients in the world die every year due to cancer, Malaysia recorded about 2314 deaths due to the disease in 1994. Thus it is essential to include products for cancer in the ideal portfolio.

Metabolism products in the portfolios of multinational companies in Malaysia had only a small market share of 4% with a phenomenal growth of 51.1% in 1992 and 26.2% in 1993. Diabetes which the major disease that is treated by these products has been growing at a very high rate and this trend is expected to continue in the years to come. Hence the justification of metabolism category in the ideal product portfolio of a local pharmaceutical company

Sensory organs category has an average sample portfolio of only 3.4% and Upha having 9.3%, the highest percentage of products that is nearly three times the sample average. Hovid, Setron and YSP has no products in this category. In the case of the multinational companies in Malaysia, the sensory organs category has only 3% market share with the highest growth rate of 82.6% in 1993. The world pharmaceutical market also had a similar trend for the sensory organs category i.e. a market share of only 2.4% but the third highest growth rate of 12%. Thus concluding the inclusion sensory organs category in the ideal

product portfolio for a local pharmaceutical company in Malaysia without any question.