MARKET SEGMENTATION AND THE IMPACT OF ONLINE MEDIA.

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ABSTRACT

Segmentation in the pharmaceutical industry is blurred by the complicated market dynamics of the industry: even the classic definition of the customer is not relevant. The customer base is made up of a number of stakeholders which includes the patient and caregiver. These patients and caregivers have become more empowered and are using the internet as their primary source of information. The internet is developing at an astonishing rate and even healthcare professionals have embraced it. Legislative restrictions make it difficult for marketers to communicate directly with patients, so new strategies need to be developed. This paper looks at the impact of online media on market segmentation within the pharmaceutical industry. It provides practical solutions on how to tackle the dilemma.

Keywords: market segmentation; online media; pharmaceutical; clustering; stakeholders; customers.

Introduction.

The impact of online media has and will continue to generate a great deal of interest across many businesses, yet most pharmaceutical companies struggle with the concept.[1] Patients and caregivers

have become more active in their pursuit for health information. [2] Studies have shown that over 85% now use the internet as their primary source of data. [3] The website "PatientsLikeMe" is an example of how individuals with life changing illnesses share their experiences with others. It reports to have over 72,000 members in its community. Their primary goal is to give patients an insight to their future, highlighting the prognosis and likely quality of life expectancies. [4]

It is not just the patients and their caregivers who are using these online portals for first-hand information. A study by Google[5] identified 86% of physicians use the internet for medical research: more importantly, 77% focus specifically on drug data and 31% have changed a patient's medication following the review. The study also identified that the majority use search engines to find material: drilling into the top three results only. This means that pharmaceutical companies have to optimise and update their websites with the appropriate keywords if they hope to utilise online media as a source to generate new business.

The growth of medical websites has been phenomenal although it is difficult to substantiate the statement. In an attempt to validate it, this paper carried out a simple exercise looking at some basic medical search terms using Google in January 2011. The objective was to identify how many likely pages were available for the users to review. The results are illustrated in table 1:

Search Term	Approximate results
Medical symptoms	15,200,000
Medical Advice	28,600,000
Medical Therapies	8,230,000

Table 1: Google search results count.

The exercise also looked at users' online search habits: it identified that there were just over 45 million monthly searches for the terms related to medical symptoms, advice and therapies (this study was

done using Google's keyword analyser). Based on the current internet evolution statistics, one can conclude that it is only likely to grow. Online media cannot and should not be ignored by pharmaceutical companies. Unfortunately, very few pharmaceutical company websites appear on page one of Google when users search for terms relating to medical symptoms, advice or therapies.

Figures for 2008 indicate that there were over 1.5 billion internet users[6] which is roughly 26% of the world population. The 10 year growth of internet users was over 750%.[6] It is not just computers driving the expansion; the sales of smartphones, which also provides a channel to access online media, grew by 96% in the 3rd quarter last year.[7] They now occupy just under 20% of the mobile phone market.

Online media has removed geographical barriers; it can create numerous opportunities for a medical marketing team to increase its brand awareness across the world. These brands will provide pharmaceutical companies with the opportunity to connect with its customers;[8,9] both healthcare professionals and patients. Brand management should not be limited to just the product portfolio, they must include all services and the corporate image. There is a concern however, Giles[10] identified that marketers within the industry have a poor understanding of the concept of branding. Businesses need to re-evaluate their marketing structure and look to the internet as a means of obtaining new opportunities.

Before embarking on such a venture, pharmaceutical companies must first decide exactly who its customers are and how it deals with them. Patients and caregiver are the ultimate consumers but regulatory restrictions make it difficult for direct communications.[11] Is this likely to change? Should this situation be challenged?

Pharmaceutical Companies' Customers.

When it comes to prescription only medicines (POMs), most people think that pharmaceutical companies deal directly with healthcare professionals (HCPs): physicians, pharmacists, nurses etc. They in turn manage the patients and caregivers (see figure 1):
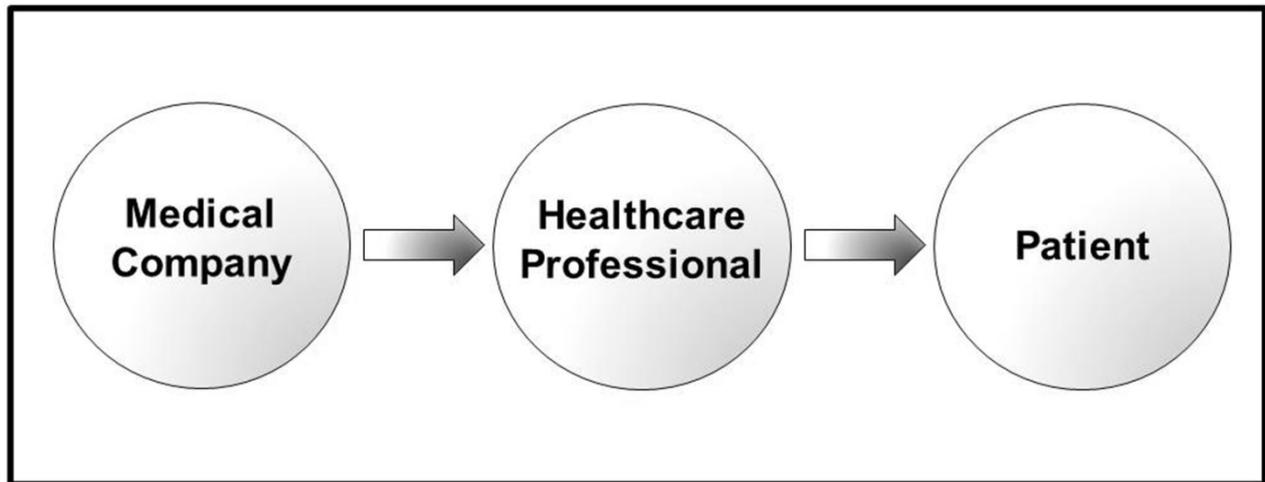
Figure 1: Old interaction between pharmaceutical companies, HCPs and patients.

This belief is largely due to the legislative constratints that drive the industry's code of practice. As it has already been mentioned, the advent of social media has meant that patients and caregivers have become more empowered and are demanding more from the sector. It means that pharmaceutical companies need to move to an integrated communications model (see figure 2):
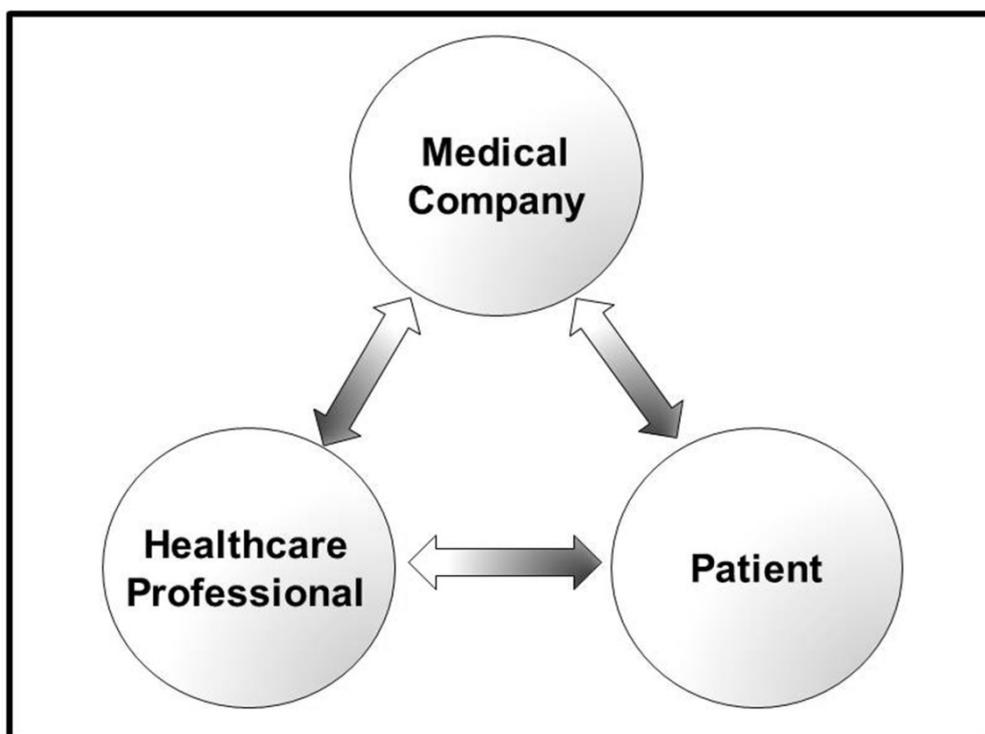
Figure 2: New interaction between pharmaceutical companies, HCPs and patients.

In doing so, they must not alienate HCPs or infringe regulatory protocol. Regrettably the model painted above does not give the full picture. In reality pharmaceutical companies have a much more complicated customer base. The classic definition of a customer is:

A person who buys goods or services from a shop or business.

Oxford English Dictionary[12]

Such a definition does not serve the pharmaceutical market and this paper would like to propose changing the definition to:

Customers of pharmaceutical companies are made up of a series of stakeholders. Each group of stakeholders provide access or authority to the next level of stakeholders to either; list, buy, prescribe, use or consume the products (or services).

In essence, the market is very different to that of the normal B2B or B2C industries. Here the market is made up of stakeholders who act as gatekeepers, guarding the access to the next stage. A product has to go through a number of gatekeepers before it can be finally consumed or used. These gatekeepers have very specific requirements that need satisfying before the business can move to the next level. The process is made more complicated by the fact that different counties have very different rules and regulations relating to how a product can be introduced. Figure 3 illustrates the flow of the customer chain with examples of who the stakeholders are:
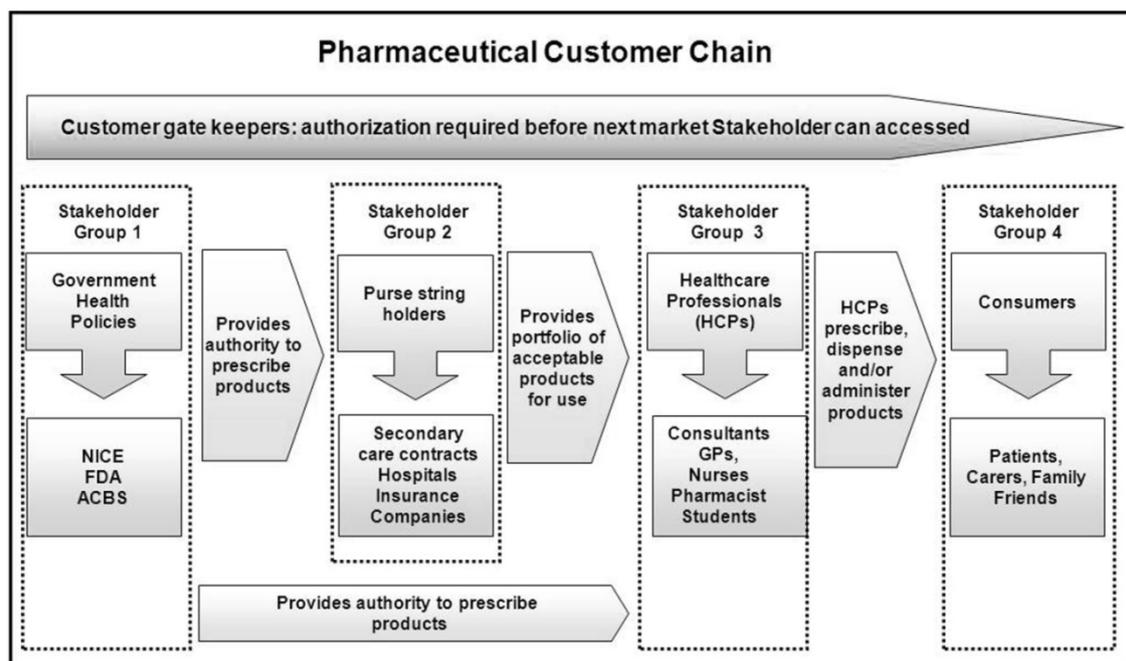
Figure 3 : A typical pharmaceutical company's customer chain.

The author has learnt from experience that many pharmaceutical companies have already segmented the first three sets of stakeholders. Each tends to be managed by separate teams but little consideration is made to the variability within these segments. More alarmingly, the fourth stakeholder group of consumers is seldom considered at all. Yet it potentially provides one of the biggest opportunities for the business. Clearly the question of segmentation strategies should be considered as part of the executive agenda.

Segmentation Strategies.

Segmentation is essentially a classification exercise, where individuals are believed to be related in certain ways.[13] It allows organisations to develop strategies which maximise their product's potential.[14] When developing such strategies, businesses should see the market being composed of many different divisions.[15] Marketers should design their products and services to target specific segments and although Dibb[16] argues that there are many different interpretations of this theory, the underlying principle is that it targets a selection of customers in order to provide a specific promotional message.

Kotler[17] suggests that segmentation, targeting and positioning are all interlinked: segmentation centres on the variables within a market; targeting is about deciding how many segments should be targeted; positioning places the products or services in the mind of the customer by communicating the desired benefit. Kotler also suggested that a business could either:

- Concentrate on a single segment with one product and marketing mix.
- Offer one product and marketing mix to a number of different segments.
- Produce different products and marketing mixes for each segment.

Unfortunately these ideas are not wholly true for the medical sector. This paper has already highlighted the fact that the classic definitions of a market and its customers are not relevant: there are many stakeholders that need satisfying before the market can be unlocked. As such, the segmentation model which was first developed by Smith[18] needs to be adapted specifically for pharmaceutical companies.

A review of the customer chain has identified that the number of stakeholders increases substantially as it gets closer to the final consumer (see figure 4). This means that a single approach to segmentation

across the whole chain is likely to lead to the wrong conclusions. This paper proposes that the segmentation exercise should be done in two stages:

1. The first stage focuses on the market access phase. (ie, the regulatory bodies, strategic buying authorities and insurance companies).

2. The second stage focuses on market development. (ie, the healthcare professionals, patients and caregivers).
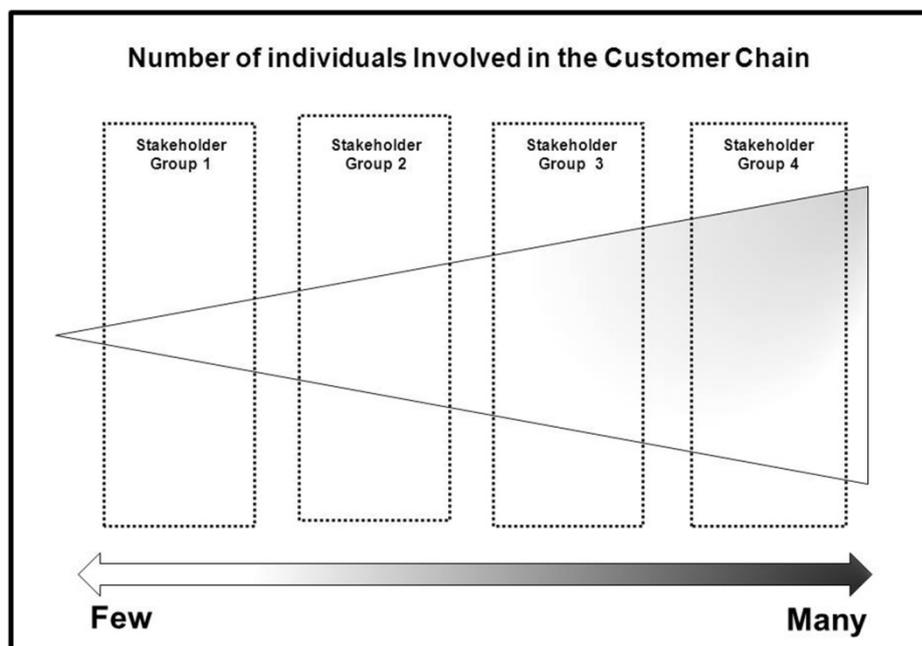
Figure 4 : Number of individuals involved in the customer chain.

Stage One: Market Access

The first stage is all about filling a need: it identifies the commercial viability for launching a new product or creating a new service. The stakeholders involved require a holistic view of the product and its proposed use. The numbers involved in this group are small, which means that the marketing and sales process can be tailored to suit each individual's need. These individual plans tend to focus on:

- Therapy.

- Geographic.

- Demographic.

- Psychographic.

- Behaviouristic.

The concept is best demonstrated with an example (note, this example is purely illustrative):

A pharmaceutical company is looking to launch a new drug in England. The drug is to be taken orally once a day to treat paediatric epilepsy.

Therapy is an oral anti-epileptic drug.

Geography is England, so the target stakeholders will be the National Institute for Health and Clinical Excellence (NICE) and then the 10 strategic health authorities located in England (once approval has been given by NICE).

Demographics apply to children with epilepsy, so an analysis of the prevalence of this condition is required to support the business case.

Psychographics is based on the fact that neurologist and parents prefer administering an oral treatment as opposed to any evasive surgery (note, there are no studies to back this point, it is only being used as an illustration).

Behaviouristic relates to the health economics of the product and how it can benefit the quality of life for the patient.

So, even though the plans were developed to suit individual needs there are clearly elements of the classic segmentation process included in the final analysis. The marketing or commercial teams involved need to understand the importance of this factor.

Stage Two: Market Development

The second stage relates to the market development phase. Here, the stakeholders will either; prescribe, use, administer or consume the products. These individuals will be the HCPs, patients or caregivers and the numbers involved could now be in the millions. This means that the expectations and needs are likely to vary significantly. A single marketing message will not satisfy the total market requirement: further segmentation must take place with the appropriate marketing strategies incorporated. Unfortunately, it has been the author's experience that too many businesses still focus on developing a single message for the HCP group. This hypothesis is reinforced by Jenkins and McDonald[19] who identified that managers tend to segment their markets not on customer groupings but on internal products.

Segmentation is a skill and should be classed as a science, backed up with evidence. This means that marketers will have to master a new range of technical competences. For those who are already embracing it, there should be no issues. For those who have not, they face a painful journey along the path of change.[20] Indeed, Levitt[21] had already identified that there are many businesses that are unwilling to recognise change for fear that it will undermine their entire strategy. Levitt's[21] study focused on the general business environment, so does his theory replicate itself when considering pharmaceutical companies? The question goes beyond the brief of this paper, but further research would be interesting. Needless to say, for success to be achieved, the issues related to change management must be addressed.

Today's economic climate brings with it many caveats, least of which are the pressures on time and resource. To date, there is no agreement on any formal way of carrying out segmentation: it is highly unlike that such a generic procedure would work for this sector anyway. In fact, there have been many academics who have argued against adopting a formal segmentation processes,[22] but equally, there have been even more who advocate the use of complex systems.[23]

Clearly some form of segmentation must take place. The solution must be simple and effective if it is to be adopted by practitioners. Cluster analysis could be the answer: many market researches already used it as a means of classification.[13] It is an inductive technique and the empirical rules it uses can easily be amended and developed to suit any needs.

The technique proposed is an adapted version of divisive clustering.[24] It is one that the author has already employed with great success. All customers are initially treated as a single large cluster, they are then divided into smaller and smaller clusters. The premise is centered on the buying (or usage) behaviours because such a factor is easily obtained by companies. The method is as follows (see also table 2 for an example):

1. Focus on HCPs data only (it is generally much easier to obtain).
2. Obtain the sales (usage) figures by customers for a given period (annual figures would be best).
3. Sort the data into descending order, then for each customer calculate the cumulative sales.
4. Establish the percentage that each cumulative value is of the total sales.
5. Split the data into three clusters (this is the process of dividing into smaller groups):

    -   Percentage of cumulative sales less than or equal to 25%.
    -   Percentage of cumulative sales greater 25% but less than or equal to75%.

- Percentage of cumulative sales greater 75%.

No	Customer Name	Sales / £	Cumm Sales / £	% Cumm Sales	Cluster Type
1	Customer 1	152,692	152,692	1.2%	Advocates
2	Customer 2	126,972	279,664	2.2%	Advocates
3	Customer 3	109,357	389,021	3.1%	Advocates
58	Customer 58	34,526	3,094,348	24.4%	Advocates
:	:	:	:	:	:
:	:	:	:	:	:
59	Customer 59	33,853	3,128,202	24.6%	Advocates
60	Customer 60	33,746	3,161,947	24.9%	Users
61	Customer 61	33,706	3,195,654	25.2%	Users
62	Customer 62	33,264	3,228,918	25.4%	Users
63	Customer 63	33,021	3,261,939	25.7%	Users
:	:	:	:	:	:
:	:	:	:	:	:
538	Customer 538	5,733	9,518,765	74.9%	Users
539	Customer 539	5,715	9,524,480	75.0%	Users
540	Customer 540	5,702	9,530,182	75.0%	Users
541	Customer 541	5,685	9,535,867	75.1%	Testers
542	Customer 542	5,676	9,541,543	75.1%	Testers
543	Customer 543	5,659	9,547,202	75.2%	Testers
:	:	:	:	:	:
:	:	:	:	:	:
3314	Customer 3314	2	12,704,979	100.0%	Testers
3315	Customer 3315	2	12,704,980	100.0%	Testers
	Total	12,704,980			
	Not buying from the company yet				Newbies

Table 2: An example of the clustering method.

Four distinct clusters are created (the principles are similar to that used in the Pareto analysis[25]) which the author has called:

- Advocates.

- Users.

- Testers.

- Newbies: this group is not in the sales (usage) figures as they are potential customers who are not currently buying or using the product yet.

Advocates are the top prescribers, the number of stakeholders involved in this group is small, which means that the marketing and sales process can be tailored to suit the individual's need. They will account for approximately 1% to 5% of the customer base. These HCPs are ideal candidates to help promote the product amongst their peers.

Users account for the bulk of the business: their numbers range from between 10% to 15% of the customer base. The plan should be to convert users into advocates.

Testers account for approximately 75% of the customer base. This segment tends to be the long tail of the portfolio and it provides the business with the greatest opportunity for gaining extra market share.

Newbies are those individuals not doing any business with the organisation, hence they do not appear on the sales list. They may be unaware of the product(s) or service(s) provided by the pharmaceutical company or have chosen to ignore them. The business needs to introduce strategies to entice these individuals to use the brands.

Due to privacy laws, the information relating to patients and their product usage will be difficult to obtain. Expensive market research programmes are needed to establish the clusters. The author has been fortunate enough to have carried out a number of these reviews covering different disease groups. In all, it can be concluded that the profiles are very similar to that identified in the HCP group. The advocates tend to be the chronic sufferers. The users are those with the classic symptoms who comply well with their medical regimen. The testers tend to be those individuals who have either classic or mild symptoms but have poor compliance. Finally the newbies are a mixture of the chronic, classical and mild suffers but are all on different medications (if at all any).

Having identified all these different groups of customers what should a business now be doing? Each cluster has very different needs so tactical plans must be developed to satisfy them. The best way to do that is to review the marketing mix.

Segmentation and the Marketing Mix.

It can be argued that the marketing mix acts as the foundation for setting all marketing plans. Many businesses focus solely on the four Ps: Price, Promotion, Place and Product. It was Borden[26] who expanded the concept to include; Process, Physical Evidence and People. On further inspection it has become clear that this extended mix is more relevant for pharmaceutical companies than any others. It is this mix that needs to be considered when trying to manage the various segments identified above.

The best way to analyse the factors is to consider each of the marketing mix elements individually whilst comparing it to the various segments:

Product: The product familiarisation is critical when dealing with the HCPs. Sampling and demonstrations are the best way to increase awareness. Online media is also a good way of spreading the word and there are a number of tactical strategies that can be put in place including email marketing, webinars (web seminars), video and audio podcasts. Due to legislative restrictions, pharmaceutical companies cannot target patients and caregivers directly with product information (POM products). They have to use utilise the concept of medical education and promote the corporate brand instead.

Promotion: PR, advertising and promotion is all about generating the right message; it should focus on the customer's needs. An element of research is required for this process. Sinha[28] supports the idea that businesses should utilise the key rule of "pull marketing": allowing the customer to discover the product or service themselves instead of having it constantly pushed in front of them. With over 45 million searches done every month on words and phrases related to medical symptoms, the internet must be the ideal place to focus the promotion plan. Bearing in mind that the "testers" and "Newbies" account for over 80% of the market, could such a tactic generate more business? No studies are available for the pharmaceutical sector but there is a lot of evidence to support in the wider commercial field. [27]

Once again the rules of marketing need to change, as this paper has already mentioned, legislation restricts manufacturers advertising directly to patients and caregivers. Many pharmaceutical companies still adopt the safe route and focus only on HCPs. Regrettably, if businesses want to dominate the results of internet searches, they need to mobilise the bulk of the users: these happen to be the patients and caregivers. E-strategies need to be developed with external link building programmes[27] and it is the patients and caregivers who they should target. To avoid falling foul of the regulations, businesses should focus on medical education as a means to capture the imagination of these consumers: if they like it they will share it in the electronic community. In turn it will increase the equity of the web page and move it up the Google ranking (be warned this is not an overnight fix).

Price: The product price will depend on the sector and geographical region. As an example, patients in the USA are more sensitive to price than patients in the UK. This is due to the fact that US citizens have to pay indirectly through their health insurance systems whereas UK citizens will have it reimbursed through the National Health system. Price is also often used as a tool to entice new customers or maintain the business: this could mean that the marketing mix is out of sync and the brand equity is being eroded.

Place / distribution: There are a number of channels open to pharmaceutical companies and they include:

- Hospital channels.
- Community channels
- Pharmacy Channels.
- Home Delivery channels.

- Internet channels.

With the exception of the first stakeholder group (regulator bodies), all the other segments are likely to be interested in this characteristic. In reality it creates additional sub-segments and sub-clusters. The skilled marketer should see this as an opportunity to add value.

Process: These are the systems used by the pharmaceutical company to support the management and delivery of the products and services. More and more of the stakeholders are demanding a better flow of information. There are now extranets that provide secure details about pricing, rebates, deliveries and much more. This element can be a real differentiator: it could be a reason why a company could lose or gain business.

The process will impact all segments and clusters: the easier it is the more likely customers will stay and do business.

Physical evidence: In the medical industry, physical evidence is paramount. It is the first and third group of stakeholders (regulatory bodies and HCPs) that focus on this factor, although as already mentioned, patients and caregivers have begun to review product efficacy. HCPs rely on detail documentation of clinical trials but the consumers look to forums and social networks for their information. Marketers need to start reviewing how their brands are being perceived over the internet.

Advocates and users are likely to be less concerned about the physical evidence whereas testers and newbies will need more reassurance.

People: The people aspect is critical in the selling process. The second and third stakeholder groups (strategic buying authorities and HCPs) are where pharmaceutical companies should concentrate their efforts. Relationship building in medical sales can be the factor that wins the order.[29] The link to the patient and caregiver is very much at an "arms distance": the use of traditional and electronic communications tools are the mechanisms used to include this segment.

Advocates and users require careful management: customer retention must remain a top priority for any business. The sales team will need to work on building the relationship in the tester and newbie segments: a focus on trust and support is key to building the business.

It should be very clear to the reader that segmentation within the medical sector is very different to that of the general industry. To be successful pharmaceutical companies must adapt and apply their strategic and tactical plans to each group. They must also start to consider how to incorporate the internet into these plans.

Conclusion and Further Research.

Segmentation is all about positioning brands and targeting customers using a various marketing mixes. Promotion is a key element of the marketing mix and the internet is the ideal means for disseminating specific messages. Patients and caregivers play an important part in optimising search engine results because of the numbers involved. Pharmaceutical marketers need to start including medical education strategies on the web when promoting their brands because online media has already had a major impact in sectors outside of the medical industry. It is highly likely that success will be seen by those medical companies that embracing this channel.

The segmentation process reviewed was based on products that had already been developed. It looked at the interaction between the customers providing the licence for use, those that listed it on their buying portfolios, those that prescribed it and finally those that ultimately consumed it. No attempt was made to look at segmentation "pre-product development". Would there be any different processes or types of segmentation? The author suggests that it is highly likely and that companies would have different means to manage the area. Some could be classed as "market orientated organizations",[30] involving customers at every stage. The others would be those who were "product orientated organization"[31] where R&D make all the decisions. Either way, it is unclear what part marketing would play in the process and how the markets would be segmented. Further research should be carried out to look at this particular dilemma.

The paper identified that the segmentation process was a means for businesses to position and target their brands with different marketing mixes. It also identified that the internet has a big part to play in getting the message to the patients and their caregivers. These messages should be restricted to medical education. Direct referencing of products is not allowed so it is the corporate brand that is promoted. It is not clear how pharmaceutical companies organised themselves to share the responsibilities of brand management of products and the corporate image. It is highly likely that companies have not even considered it yet. Further research should be carried out to look at how brand managers integrate the corporate image into their daily routines.

References were made specifically to pharmaceutical companies and the products considered were classed as POMs. The author would argue that there are many similarities to those companies producing medical devices, nutriceuticals (foods for special medical purposes), veterinary, dental and even cosmetic surgery. There are also synergies with over the counter (OTC) products. As such, the concept of segmentation described above can easily be adapted to cover these sectors.

Finally, the process of segmentation is confusing; it is compounded by the complicated market dynamics of the medical industry. There are a number of bodies (including the Chartered Institute of Marketing and the American Marketing Association) that could produce clear guidelines on how the industry should organise itself.

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