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SUCCESSFULLY EXPLOITING e-MARKETING AND SALES IN THE PHARMACEUTICAL INDUSTRY

the European approach

Aleksandar Ruzicic, John Haughey and Denise Silber

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EXECUTIVE SUMMARY

The challenge of e-marketing and sales in Europe

Despite the hype and investment in e-health over the last few years, it is still fair to say that the Internet is not yet fully embraced by the pharmaceutical industry for marketing and sales. With pharmaceutical companies already having started experimenting with new marketing approaches, full adoption can be expected soon. Between 60% and 70% of pharmaceutical managers have recently identified marketing and sales as the area to be impacted most by the Internet. Pharmaceutical companies are committed to invest heavily until 2003, but struggle – especially in Europe – to identify the winning approaches. Europe poses significant challenges owing to unequal rates of connectivity, fragmented and locally regulated markets, a local e-health supplier base, and missing providers of total e-marketing and sales solutions.

Building the right organisation and funding it adequately

Pharmaceutical companies have to decide how to organise and assign responsibilities for e-business, and, more specifically, e-marketing and sales. European pharmaceutical companies have not yet adopted the approach of the US companies Merck and Lilly to build e-venture units. Almost all top pharmaceutical companies have been creating large global e-business organisations, spending up to €50m and more per company. The medium-sized pharmaceutical companies are typically investing under €15m. However, despite all the commitment, lack of budgets has still been the most important obstacle to achieving e-marketing goals, owing to the dispersion of funds across countries and/or products. Lack of commitment makes Internet budgets fragile and among the first to be cut at the local level, which calls for a centralised approach to fund costly experiments.

Physicians remain the primary target, but consumers/ patients are also targeted

As direct-to-consumer (DTC) marketing is still prohibited in Europe, physicians are the focus of more than 50% of companies, while about 25% are targeting predominantly consumers/patients. e-Marketing initiatives are segmented predominantly by disease/therapeutic area and product/brand. This has led to a proliferation of proprietary disease and therapeutic area Websites by pharmaceutical companies. Pharmaceutical marketers believe that their relationships with specialists and patients under treatment will be impacted first. Besides the Internet and e-mail newsletters, the use of which is ubiquitous, few marketers have started to leverage mobile phones or personal digital assistants. The major objective – increasing market share – is difficult to translate into concrete Internet marketing initiatives. Business-to-consumer direct marketing, compliance/disease management and e-detailing to physicians are believed to be the future 'killer applications' of online marketing and sales.

Simple three-step decision-making framework proposed

To ensure the successful implementation of initiatives, pharmaceutical marketers have to go through a rigorous decision-making framework, which we propose should encompass three steps. First, they need to define the objective and target audience of the initiative based on traditional patient/physician flow analysis. Second, they need to decide how to implement the selected initiative, selecting between soft and hard branding (disease versus product) and infrastructure ownership (independent versus company sites). Finally, they need to locate the ideal partner among the numerous e-health suppliers, and garner implementation support internally. Owing to widespread scepticism of e-marketing, marketers should apply a rigorous evaluation mechanism, which includes agreed-upon objectives, corresponding quantitative metrics and process measures, until the initiative goes live. Long-term, pharmaceutical companies will benefit most from the Internet by adopting integrated Internet marketing programmes and by standardising and automating their marketing processes.

Favourable regulatory changes on the horizon in the EU

The pharmaceutical industry often cites the stiff regulation in Europe as a key hurdle for Internet-based marketing, especially where direct-to-consumer advertising is concerned. Recent action taken by regulatory and/or self-regulating bodies puts this into perspective, and has increased the degree of freedom for pharmaceutical marketers. The EU has issued interpretative guidance related to the Internet, allowing the unmodified and unabridged publication of information authorised by Competent Authorities, such as the Summary of Product Characteristics or the package leaflet, to the general public. There might even be more favourable changes based on a study promoted by the European Parliament on the use of new technologies, such as the Internet, for the marketing and sale of medicines. According to the *Financial Times*, we might see a relaxation of DTC regulation in Europe, first on three diseases with common treatment across Europe: AIDS, asthma and diabetes.

Navigating the complex European e-health supplier landscape

The choice of e-health suppliers offering help to pharmaceutical marketers is overwhelming. Before deciding on the right partners, pharmaceutical marketers must obey a number of ground rules. First, never be led by a suppliers' technology solution, no matter what claims may accompany it. Successful online strategies can be driven only by the needs of the business. Second, recognise that nearly all suppliers are trying to prove their solutions in the market. Where possible, ensure that you enter into shared-risk agreements, maximising your chances of a successful outcome. Third, retain control of your projects, do not pass all responsibilities to the suppliers you engage. Any solution must be actively sponsored, otherwise it will never be adopted internally. Fourth, ensure that all learning points are communicated effectively to all relevant parts of your organisation. Fifth,

remember to ensure that performance metrics are defined prior to the deployment of any solution. Finally, don't be scared by new technologies and their suppliers – they will not replace traditional marketing and sales techniques, they will simply serve to enhance them.

Towards a global health service industry

The Internet cannot be isolated from other advances in healthcare and is playing an important enabling role within the changing healthcare environment. Care for the individual is becoming the focal point of the industry owing to the implementation of electronic patient records that contain data on the individual, and advances in (pharmaco)genomics, whereby drugs are tailored to the genetic predisposition of the individual. Pharmaceutical companies will be forced to focus on the customer relationships, and offer a product/service bundle, since they have to target the physician with patient-specific messages. Consumer/patient-centric processes, such as direct marketing and compliance/disease management programmes, will also become important, resulting in a gradual shift of the traditional marketing and sales mix. The synergistic changes of the genomics and Internet revolution will ignite the genesis of a global health service industry. The formation of the new industry will be further accelerated by the next technology wave, such as broadband and next-generation mobiles, improving the ability to provide highly customised and interactive health services to anybody, any time, anywhere. The potentially positive impact on the healthcare system will materialise only if regulation allows for changing roles of healthcare professionals and patients. Because of the strong lead of governments in healthcare, especially in the UK, where the NHS is committed to full implementation of electronic patient records by 2005, Europe might create a distinct advantage by adopting at least country-specific standards. Pharmaceutical players can enter the global health service industry cost-effectively by building services around their own products, which generate incremental product sales. The next step will be an integrated disease service, such as Roche's Integrated Cancer Care Unit. However, it will prove much more difficult to complete the transformation and provide one-stop-shop consumer/patient-centric global health services. Therefore, we might see an acquisition wave when technology adoption accelerates again, and global health services are spotted as the next large multi-trillion euro battleground.

CHAPTER 1: INTRODUCTION

The pharmaceutical Internet presence began with corporate Websites shortly after the introduction of the World Wide Web in 1995. The second wave of Internet initiatives involved physician-only sites. When, after 1997, the FDA passed laws enabling pharmaceutical marketers to engage in direct-to-consumer (DTC) advertising, pharmaceutical companies began introducing branded consumer sites in the US. In 1999, a whole new era of professionalism was symbolised by the creation of e-business positions in large pharmaceutical companies. At the same time, a cottage industry of e-health dotcoms was spawned. In 1999 alone, 20 e-health IPOs were completed, raising an aggregate of nearly $1.5bn.[1] All these companies eyed the pharma industry as potential clients, given their deep pockets.

The highly visible Healtheon/WebMD merger[2] and the subsequent aggressive merger and acquisition (M&A) activities of the merged company led to high visibility of the Internet at the highest management levels in the pharmaceutical industry. While Healtheon/WebMD consolidated the US e-health sector, the e-health industry continued to attract a large amount of cash, since it promised a fundamental change of the healthcare industry, and therefore the environment for pharmaceutical marketers. What is left from the investment hype today, after the bubble burst and more traditional managers have gained in influence across the e-health industry, such as Marty Wygod's appointment to CEO replacing Jeff Arnold at Healtheon/WebMD?

It is clear now that the Internet has already started to transform healthcare, as 34% of US I-healthcare seekers claim to receive different treatment as a result of information they found on the Internet.[3] It seems that pharmaceutical companies can already take advantage of the Internet, at least for marketing and sales. Pharmaceutical companies have started to invest significantly in e-business and e-health, announcing new e-business units and e-health investment funds. Merck announced a $100m Merck Capital Venture subsidiary in November 2000, which will invest in private Internet and other emerging businesses focused in areas related to the commercialisation, distribution and delivery of pharmaceuticals and related healthcare services.[4] Eli Lilly committed $50m to its e.Lilly unit in January 2001, which targets strategic investment opportunities to help Lilly reduce the risk and increase the productivity of research and development (R&D), reduce the cost and increase the speed of clinical trials, and increase sales of Lilly brands through more intimate customer relationships.[5] Today, most of the top 15 companies have focused e-business units, on a corporate, regional and/or functional level. Among others, pharmaceutical companies have started to use the Internet for marketing and sales. It is this area where the Internet is increasingly seen as a great opportunity, as indicated by Leslie Hudson, Senior Vice-president and Head of Emerging Technologies of Pharmacia:

> *This technology [Internet] is truly intellectually liberating. It supports human communication and relationships and drives knowledge-based sales and marketing. It offers a new channel with a laser-like focus, facilitating coherent positioning and actions.*

---

[1] Wit Capital, 'eHealth 2000: healthcare and the Internet in the new millennium', 31 January 2000.
[2] Reuters, 19 May 1999.
[3] P\S\L Research, I-PT Module A, US only, 'Patients and the Internet', February 2001.
[4] See http://www.merck.com/newsroom/press_releases/112800.html
[5] See http://newsroom.lilly.com/news/story.cfm?id=737

Most of the e-health activities have been led from the US, both at a start-up and pharmaceutical company level. During May 2001, IBC Global Conferences conducted a European conference in Barcelona on e-health, pharmaceutical online marketing and sales, and m-health.[6] Given Europe's strong position in mobile telephony, it is well positioned to dominate m-health and play an increasing role in the nascent e-health industry. Also, government initiatives such as the UK NHS's commitment to implement electronic medical records by 2005 will lead to imposed country-standards – potentially much earlier than the US private sector consolidates on one standard – as happened in mobile technology.

However, at present the complexities of the European e-health market are far greater than those in the more advanced US market. European pharma marketers have only just started to invest in e-marketing initiatives and lack the experience of their more Internet-aware US peers. Tackling the complexities of the hostile European regulatory environment will present a formidable challenge, particularly to small and medium-sized companies. In addition, marketers will face the challenge of navigating the highly fragmented European e-health supplier industry, which is organised mostly around local axes. Therefore, this report helps European managers by focusing on Europe and covering specific issues from a European point of view, such as organisation, ongoing e-marketing and sales initiatives, e-marketing strategies, case studies and e-health suppliers. The report also includes a strategic outlook, analysing the long-term impact of the Internet in the context of all other trends in healthcare.

INTERNET USAGE BY PHYSICIANS AND CONSUMERS IN EUROPE

There is much less transparency on Internet usage by European physicians and consumers than in the US. Since data are often already outdated when published, only a short summary of the most recently published and publicly accessible research has been summarised below. A good introduction to global research results on the role of the Internet in healthcare is available at InPharm, which summarises research performed between 1996 and early 2000.[7] Unfortunately, the published research will not be sufficient for European marketers embarking on Internet marketing and sales. They will most likely have to perform highly focused, customised research on their specific issues, such as P\S\L Research (suppliers will be discussed in Chapter 8 of the report). Alternatively, they might rely on a few pan-European (or global) sources, providing continuous research:

- In February 2001 NetDoktor and Datamonitor announced a landmark partnership to generate industry analysis and information products for the European e-health market.[8]

- P\S\L Research publishes regular studies about the Internet, such as the most recent

[6] IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.
[7] See http://www.inpharm.com/worldreview/010300.html
[8] See http://www.netdoktor.com/press_releases/UK/pr-datamonitor.shtml

I.MD.2000 report covering major Western markets, published in July 2000.[9]

European physicians adopt the Internet

According to P\S\L, a majority of European primary care physicians have already been online in the largest European markets, namely Germany, France, Italy, the UK and Spain.[10] The research is based on interviews conducted by telephone and online from mid-March to mid-April 2000. In all countries, at least 55% of physicians had accessed the Internet by Q2 2000. P\S\L Research has estimated that this number will increase to at least 75% in all five countries by Q2 2001. However, pharmaceutical marketers have to be cautious when interpreting the research because physicians were asked about 'ever having accessed' the Internet, which is only the first step in adopting the Internet fully (see Table 1.1).

In its most recent physician study, I-MD Module 1 published in May 2001,[11] P\S\L has researched the attitude of physicians towards, for example, e-mail correspondence with patients. Interestingly, only UK physicians are less amenable to e-mail exchange with patients (46%), compared with the US (52%). In Spain, Italy, France and Germany, physicians seem to be more in favour of e-mail exchange with patients, and the support ranges between 84% and 67%, respectively (see Figure 1.1).

According to the same P\S\L Research, European physicians are almost as likely to consider treatment options suggested by patients who have taken the time to inform themselves, as their US colleagues. Active and informed patients could quickly influence physicians, since between 95% (Spain) and 65% (Italy) of European physicians are willing to listen to them (see Figure 1.2).

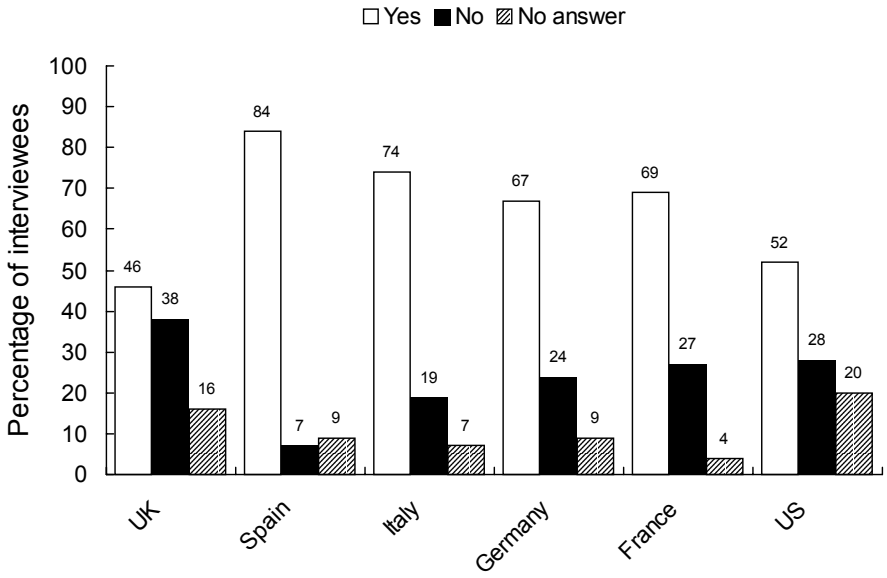
Table 1.1: Primary care physicians 'ever having accessed' the Internet

Country	Sample size	Q2 2000 (%)	Estimated Q2 2000 (%)
UK	100	82	93
Germany	100	55	75
France	100	56	78
Italy	100	56	75
Spain	100	70	86

Source: P\S\L Research, Spring 2000, I.MD. 2000

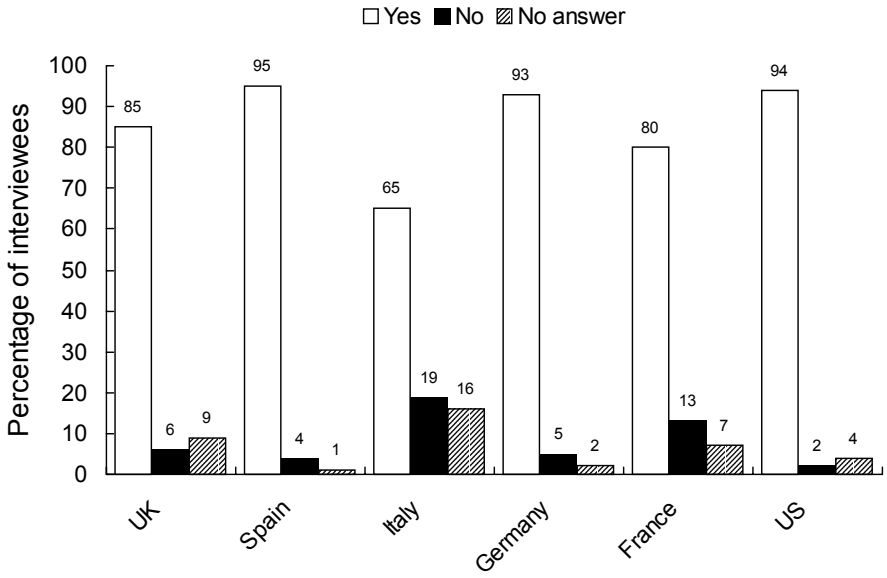
[9] See http://main.pslgroup.com/psl.nsf/our_news.html, link 'The majority of primary care physicians are now using the Internet in major Western markets'.
[10] For a short summary see http://www.pslgroup.com/imd2000v3.pdf
[11] P\S\L Research, I-MD Module 1, May 2001.

Figure 1.1: 'I would be amenable to increased e-mail correspondence with patients in future'



Source: P\S\L Research, I-MD Module 1, May 2001

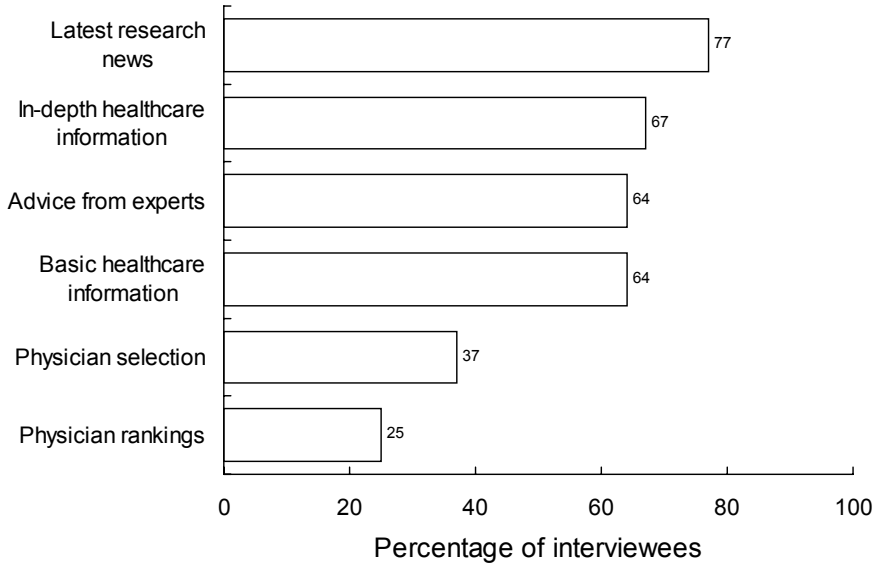
Figure 1.2: 'I am usually happy to consider treatment options suggested to me by patients who have taken the time to inform themselves'



Source: P\S\L Research, I-MD Module 1, May 2001

The Boston Consulting Group (BCG) report *Patients, Physicians, and the Internet*, published in January 2001, highlights what services European physicians would like to have on the Web (see Figure 1.3).[12] The research was conducted on the telephone with 250 physicians from Germany and Sweden, of which half were Internet users. The physician sample included general practitioners, members of large practices and specialists. Physicians are interested in research news, in-depth healthcare information and expert advice. Ninety-four per cent of GPs and 83% of specialists, respectively, would use in-depth information on drugs at least occasionally. Sixty-nine per cent of physicians consider online certified training rather or definitely important. They prefer a group of university clinics (80%) and physicians' associations (71%) to provide it, and trust pharmaceutical companies (34%) and government sick funds (17%) less.

Figure 1.3: Which services would physicians like to have on the Web?



Source: Boston Consulting Group, *Patients, Physicians, and the Internet*, January 2001, p. 15

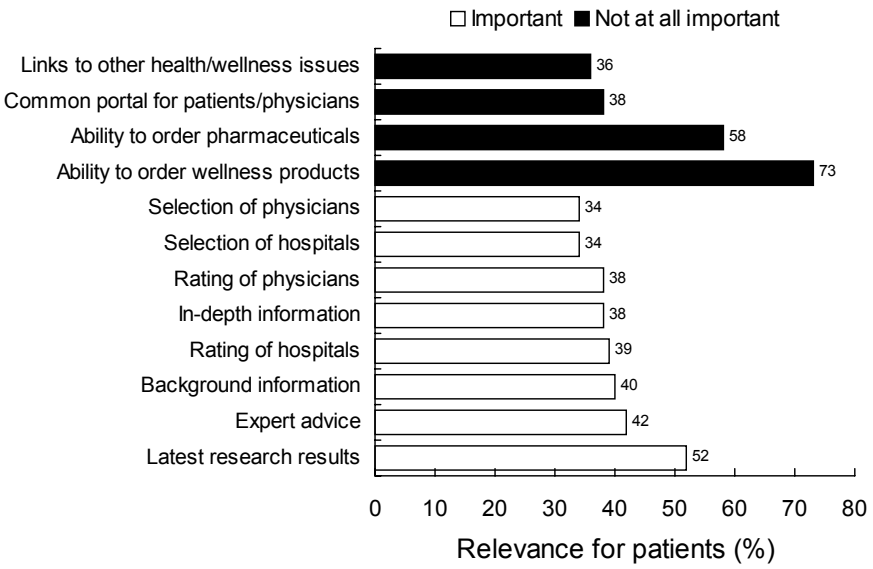
The paucity of research on European Internet consumers

The January 2001 BCG report is also one of the first attempts to segment European consumers and patients. As with physicians, the research has focused on Germany and Sweden. All interpretations of the survey results need to bear in mind that there is no uniform European e-health consumer, owing to the extreme diversity existing between northern and southern Europe.

Patients want recent findings and expert opinions, and are less interested in the ability to order wellness or pharmaceutical products (see Figure 1.4). They usually find their information through the use of general search engines (55%) or special (disease) sites (35%), such as diabetes.de; BCG explains:

[12] Boston Consulting Group, January 2001, *Patients, Physicians, and the Internet.*

Figure 1.4: What is most important/not at all important for patients?

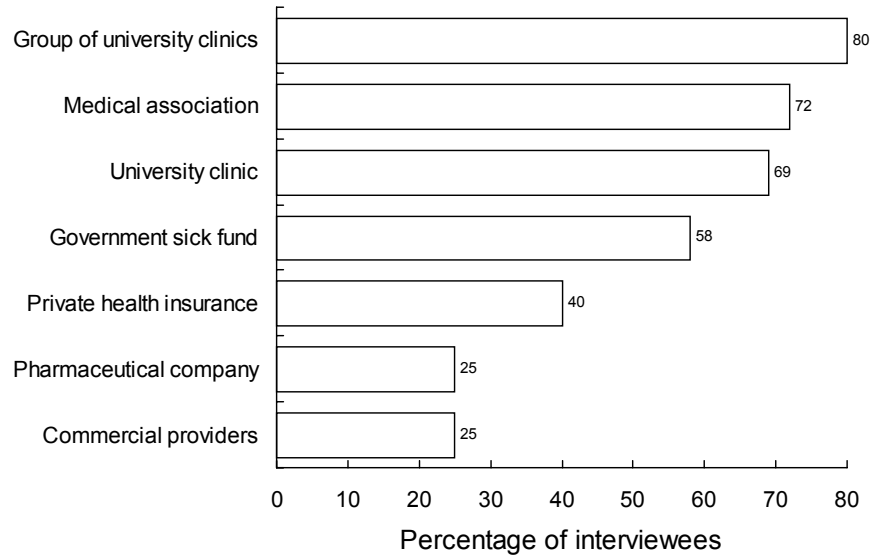


Source: Boston Consulting Group, *Patients, Physicians, and the Internet*, January 2001, p. 11

Our research indicates that many European consumers are not yet familiar with the health portal concept. Those who have tried health portals consider the information they find there broad and shallow. Consumers who start with a general health portal end up at a more specific and detailed site.

BCG has also researched credibility among patients. In Europe, patients trust a group of university clinics, medical associations and university clinics most. They trust pharmaceutical companies and commercial providers least, while government sick funds and private health insurers are also perceived as potentially biased (see Figure 1.5).

Figure 1.5: Whom do patients trust and use as a source of information portals?



Source: Boston Consulting Group, *Patients, Physicians, and the Internet*, January 2001, p. 11

RELEVANCE OF THE e-HEALTH MARKET AND PHARMACEUTICAL e-BUSINESS

The Internet marketing and sales activities of pharmaceutical companies cannot be isolated from the e-health market. Marketers looking to identify winning e-marketing initiatives should consider carefully the increasing evidence that both physicians and consumers prefer unbiased, independent information online, such as the European BCG report. A US study by Datamonitor[13] indicates that peer-reviewed online journals, physician group sites and objective product information sites are presently the preferred information sources online for physicians. Together with company press releases, they are also the most likely to change prescribing behaviour. A proper understanding of the e-health landscape, and customer expectations of the different players, is important for successful e-marketing and sales initiatives. While e-health per se is outside the scope of this report, a short overview of the e-health market is provided below. Where relevant, e-health suppliers will be mentioned in subsequent sections.

Pharmaceutical companies are already 'using Internet technologies to transform key business processes', which is how IBM describes e-business:[14]

> *When you get right down to it, e-business is a simple concept – an e-business is an organization that connects critical business systems directly to key constituencies (customers, employees, suppliers and distributors) via the Web (Internet, intranet and extranet). But this simple concept becomes powerful quickly. As customers, employees, suppliers and distributors are all connected to the business systems and information they need, e-business actually transforms key business processes.*

The pharmaceutical industry had invested heavily in customer relationship management (CRM) through sales force automation (SFA) and supply chain management (SCM) through electronic data interactions (EDI), even before the Internet. The Internet has opened a new set of opportunities across the pharmaceutical value chain. The impact on marketing and sales is highlighted below.

Four e-health segments: content, commerce, connectivity, care

In the Pharmaceutical Executive Supplement article 'eHealth overview: evolution of the eHealth space',[15] Dr Stan Bernard added the most relevant fourth 'c', care, to the already widely accepted three 'c's in e-health, namely content, commerce and connectivity:

> *eHealth refers to those sites or entities leveraging the Internet to provide health care information, products, technologies, or services. Those four offerings, in turn, form the basis for segmenting the eHealth space into four markets: content, commerce, connectivity, and an emerging segment that I have termed the 'care space'.*

[13] Datamonitor, May 2001, 'Internet marketing strategy to optimize physician access'.
[14] See http://www-4.ibm.com/software/ebusiness/docs/appservices.html
[15] Pharmaceutical Executive Supplement, *eHealth, the Internet and the Industry*, March 2000.

A short overview of typical European business models, with examples, is given below. While some models, such as those relating to commerce, are still country-specific activities, others such as content or mobile disease management are already European or global (see Table 1.2).

Table 1.2: e-Health business models

e-Health segment	Typical business model	Competitive scope	European example
Content	Consumer portal	Few pan-European	www.NetDoktor.com
	Physician portal	Country specific	www.Doctors.net.uk
Commerce	Online pharmacy	Country specific	www.docmorris.com
	B2B hospital procurement	Focused on medical devices	www.ghx.com
Connectivity	Electronic medical record	Few across Europe	www.gmd-net.com
	Country platform	Natural monopoly	www.cegetel.rss.fr
Care	Disease management	Mostly US based, few global	www.lifechart
	Web-technology platform	Mostly US based or global	www.softwatch.com

Source: almasan Limited

It is important that pharmaceutical marketers fully understand the e-health space for the geographic and disease market they are focusing on. Depending on the marketing objectives, e-health companies can be competitors, partners or solution suppliers, or even all at once. Most e-health companies are targeting the deep pockets of the pharmaceutical industry as a lucrative revenue stream.

Pharmaceutical e-business along the value chain

The pharmaceutical industry has started Web-enabling its major core processes along the value chain, mainly R&D, supply chain management, and marketing and sales, as outlined in Table 1.3.

Table 1.3: Pharmaceutical e-business examples

e-R&D	e-SCM	e-Marketing and sales
Internet collaboration tools (e.g. workflow solutions)	e-Procurement (e.g. raw materials/services)	e-Customer relationship management (e.g. call centre)
e-Clinical trials (e.g. recruitment, data capture)	Optimisation of product flows (e.g. product launches)	Internet-based physician marketing/sales (e.g. e-detailing)
R&D portals (e.g. intellectual property marketplaces)	Internet channels (e.g. B2B healthcare exchange)	Consumer/patient initiatives (e.g. compliance programmes)

Source: almasan Limited

During Q2 2001, online marketing and sales surfaced as the focus for pharmaceutical e-business in two independent surveys. Skila has published an overview of a new report, which places commercialisation as the highest priority within pharmaceutical e-business:[16]

> *Commercialization, including sales, marketing, customer relationship management and e-commerce, emerged as the top priority with 63% of all mentions.*

In another survey, conducted by Cap Gemini Ernst & Young together with INSEAD,[17] in which more than 100 senior managers from 42 companies across North America, Europe and Australasia participated, almost 70% chose marketing and sales as the area likely to be most impacted by the Internet:

> *Our respondents were quite uniform in where they believed e will have the greatest impact. Nearly 70% of the pharmaceutical companies said that e will have the biggest impact on how they go to market.*

The Web-enabled processes are putting the historically isolated pharmaceutical functions closer together, and facilitating collaboration along critical business processes. Research and development and SCM can contribute significantly to Web-enabled marketing and sales, especially e-CRM. Research and development should capture critical pre-launch experience, especially interactions with opinion leaders. Supply chain management should capture any customer support interactions and highlight differentiation opportunities by customer segment.

Pharmaceutical marketers can leverage Web-enabled R&D and SCM processes to improve marketing and sales performance. Using e-clinical trials processes, they can conduct experience trials after a product has been approved for launch. They can also use new Internet channels for distribution to increase customer reach and generate additional market insights. In addition, their contribution to Internet-enabled cross-functional processes will become highly important, such as in the areas of product development and licensing.

Pharmaceutical marketing and sales

During 2000, Accenture conducted research on the marketing and sales capabilities of European pharmaceutical companies, and involved the participation of 77 executives from 20 prescription-based pharmaceutical companies.[18] Key drivers for financial performance of pharmaceutical companies were:

- information management
- relationship management

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[16] Skila, 'Module One eBusiness EDGE report', see http://www.eyeforpharma.com/index.asp?news=15063

[17] Cap Gemini Ernst & Young and INSEAD, *Vision & Reality: The Quantum Shuffle – the impact of e on the pharmaceutical and medical devices industry*, 2001, see http://www.eyeforpharma.com/index.asp?news=16320

[18] Accenture, *European CRM Survey*, 2000.

- performance management
- product and service offerings management.

The two largest levers for performance improvements, 'leveraging customer information from the marketing process' and 'developing effective information technology', are both related to information management. The third and fourth levers are related to relationship management: 'tender management' and 'developing an effective e-commerce strategy'.

The study also researched the future importance of capability. 'Developing and executing an effective e-commerce strategy' was considered the most significant growth capability in the marketing area, rendering the Internet a competitive feature by 2003. Eighty per cent of respondents believe that the Internet will offer a real competitive advantage, while half of the companies believe that it is essential to develop an effective e-commerce strategy by 2003. In more detail, the surveyed companies are committed to the following activities until 2003:

- 80% will provide disease and wellness information on the Internet
- 77% will provide services online
- 75% of the companies will have a defined e-commerce organisation
- 68% will provide online order capability and clinical trials
- more than 50% will handle the distribution of selling materials through the Internet
- 50% of the companies will sell products over the Internet.

Clearly, within the next few years European pharmaceutical companies will have to invest massive resources in Internet-related activities, and link these activities closely with their overall marketing and sales processes. Pharmaceutical marketers are especially intrigued by the opportunity to get closer to the patient, and deliver value-added, individualised services to the healthcare system at large. The new customer paradigm, the emerging 'e-health consumer' was discussed during a Healthcare 2020 platform held at INSEAD in June 2000, in which more than 50 people participated, representing pharmaceutical companies, dotcoms, biotechnology, media, consulting, academia, finance and retail:[19]

> *The Internet offers limitless options for the development and distribution of a wide range of personalized services and interactive health management tools. How do we develop these offerings to complement existing health care services?*

[19] See http://www.insead.edu/events/e-health/presentations/HMI200~1.QXD.pdf for a report.

EUROPEAN e-MARKETING AND SALES FOCUS

The complexities of the European e-health market are far greater than those in the more advanced US market. European managers have only just started to invest in e-marketing initiatives and lack the experience of their more Internet-aware US peers. Also, market research with physicians and patients is rare, unlike in the US, where no month passes by without new results being published. Tackling the complexities of the hostile European regulatory environment will present a formidable challenge, particularly to small and medium-sized enterprises. The e-health supplier industry is highly fragmented and organised mainly around local axes. In order to deliver the end-to-end solutions sought by clients, e-health suppliers must form partnerships with companies offering complementary services. Also, the leading e-marketing and sales suppliers currently have only a limited European presence, increasing the difficulties that pharmaceutical managers experience in obtaining adequate support.

Topics and limits of the report

The highly complex nature of the European market warrants an extensive survey of regional pharmaceutical e-marketing and sales practices. This report includes an overview of current European e-marketing initiatives by pharmaceutical companies, covers selected organisational forms to capture identified e-business opportunities, makes an assessment of different e-marketing strategies, together with short case studies, and provides a strategic outlook. Finally, pharmaceutical marketers will find useful resources on regulatory and e-health suppliers at the end of the report.

The US is used occasionally as an indicator for the future. While most of the top 15 companies have initiated significant Internet-related investments, this report also includes the medium-sized segment through the use of a survey, a segment that is well established across European local markets.

Internet-related activities in other functions, such as R&D or SCM, are highlighted only if they are relevant for marketing and sales. Also, the report does not include a comprehensive overview of Web-based business software, such as sales force automation tools or customer relationship management, but does cover the integrated use of such tools for online marketing and sales.

Research-based methodology

This report is based on substantial research. Two different Internet surveys were conducted, one each with pharmaceutical marketers and e-health suppliers. In addition, more than 100 attendees at the IBC conference entitled ‘eHealth-europe’, which was held in Barcelona from 21 to 23 May 2001, participated in an audience survey. These surveys have been complemented with extensive desk research, individual discussions with experts – on topics such as regulation – and author-proprietary frameworks, to provide the basis for the report.

The Internet-based survey of approximately a dozen pharmaceutical marketing and e-business managers targeted two equal segments, the top 15 pharmaceutical companies and the mainly European-based medium-sized pharmaceutical companies. A total of 11 companies responded, with a maximum of two respondents per company. The

survey focused on soliciting industry input on the following issues (for a detailed outline of the questionnaire see Appendix 1):

- capturing e-business opportunities
- organising for e-business
- realising the potential of e-marketing and sales
- the strategic outlook for e-business.

A second Internet-based survey targeted approximately 20 e-health suppliers, with one response per company. The survey solicited input from six different segments that are highly relevant for Internet-based marketing and sales. These are e-marketing solution providers, traffic/reach providers, e-care providers, content providers, authorisation providers and market research providers. e-Health suppliers gave input on the following topics (for a detailed outline of the questionnaire see Appendix 2):

- business overview
- industry and market assessment
- organisation
- products and services
- sales and support
- trends.

The third survey conducted at the eHealth-europe conference in Barcelona triggered responses from 110 attendees, of which approximately a third are working for large and medium-sized pharmaceutical companies. The answers from the pharmaceutical segment on the researched topics, as outlined below, have been used throughout the report (for a detailed outline of the questionnaire see Appendix 3. A detailed analysis of the survey can also be found in a separate IBC conference report):

- demographics of the surveyed audience
- organising for e-business
- e-nabling pharmaceutical processes across the value chain
- winning approaches for online marketing and sales
- emerging opportunities in e-health.

We would like to thank all survey participants, and especially those who participated in our two online surveys. Without their help, we would not have been able to enrich this report with valuable insights from the people who are shaping European pharmaceutical online marketing and sales. Our appreciation goes to the companies and their representatives listed in Table 1.4. A short overview of the e-health suppliers that participated in the survey is given in Appendix 4.

Table 1.4: Companies participating in the Internet surveys (alphabetical order)	
Pharmaceutical survey	**e-Health supplier survey**[20]
Amgen	AtMedica
AstraZeneca	Bertelsmann Springer Medizin Online
Aventis Pharma	Conceptis Technologies
Eli Lilly	CyberDialogue
Novartis Pharma	Dendrite
Orion Pharma	Egora
Pfizer	Epocrates
Pierre-Fabre	IBM
Schering	Impelsys
Schering-Plough	Interactive1
Schwarz Pharma	LifeMasters
	MedHermes
	Mednet Media
	MedPanel
	Medscape
	Medsite
	NetDoktor
	Optas
	Physicians Interactive
	Physician Verification Services
Source: almasan Limited	

CONCLUSION

Despite the hype and investment in e-health over the last few years, it is still fair to say that the Internet is not yet fully embraced by the pharmaceutical industry for marketing and sales. Pharmaceutical companies have started to experiment with new marketing approaches and are committed to heavy investment until 2003. This report is targeted at pharmaceutical marketers who want to launch e-marketing and sales initiatives in Europe. It will help them to overcome the European challenges of fragmented and locally regulated markets, a local e-health supplier base and the lack of providers of total e-marketing and sales solutions. The report is based on extensive surveys with pharmaceutical managers, e-health suppliers and regulatory decision makers.

[20] At the time of writing, almasan Limited has a partnership agreement with MedPanel, Physician Verification Services and Medscape to market and sell services across Europe.

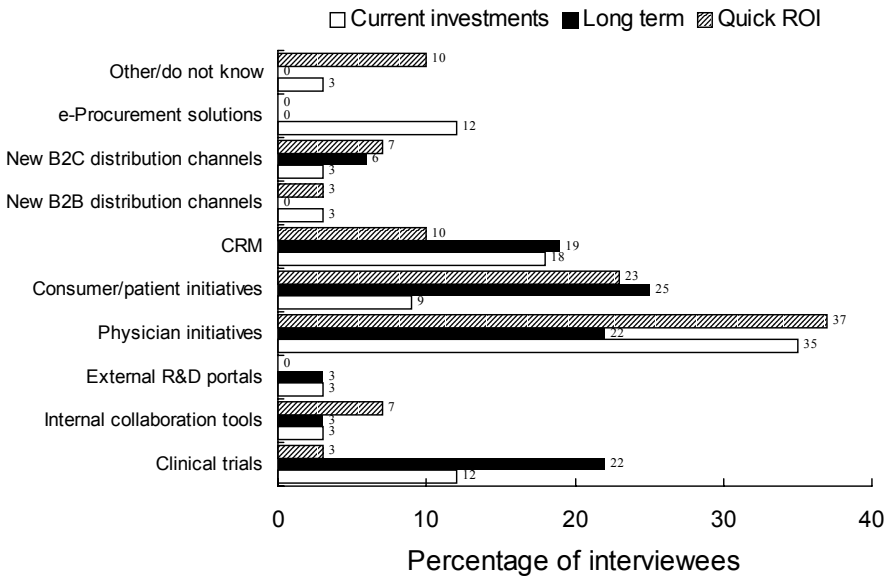
CHAPTER 2: CAPTURING e-BUSINESS OPPORTUNITIES

The challenge for pharmaceutical companies starts with the decision on how to organise and assign responsibilities for e-business and, more specifically, e-marketing and sales. Most companies are assigning top priority to Internet initiatives in the area of marketing and sales, as opposed to R&D or supply chain management. Irrespective of such parameters as quick return on investment (ROI), long-term benefits, or current investments, e-marketing and sales was always by far the top choice of 60–70% of the pharmaceutical respondents of the Barcelona survey. As a result, e-marketing and sales initiatives are integrated into pharmaceutical companies' Internet strategy, and the resources are embedded in larger e-business organisations.

Quick ROI is expected from physician initiatives (35%) and CRM efforts (18%), followed by Web-enabling e-procurement and clinical trials (12%). Long term, consumer/patient initiatives, physician initiatives, clinical trials and CRM efforts almost scored equally, with between 20% and 25% of responses. When asked for the current investment pattern of their companies, respondents cited physician initiatives (37%), and consumer/patient initiatives (23%) as a top priority, clearly leaving CRM efforts (10%) far behind. Interestingly, the top three priorities for current investments are all related to marketing and sales (see Figure 2.1).

When analysing the discrepancy between the current spending pattern and the areas predicted to yield quick ROI, there is a significant gap of around 10% for e-procurement, clinical trials and CRM efforts, which might indicate too few resources being invested there. On the other side, consumer/patient initiatives receive much more funding than warranted by the short-term ROI expectations, probably owing to the anticipated large long-term benefits.

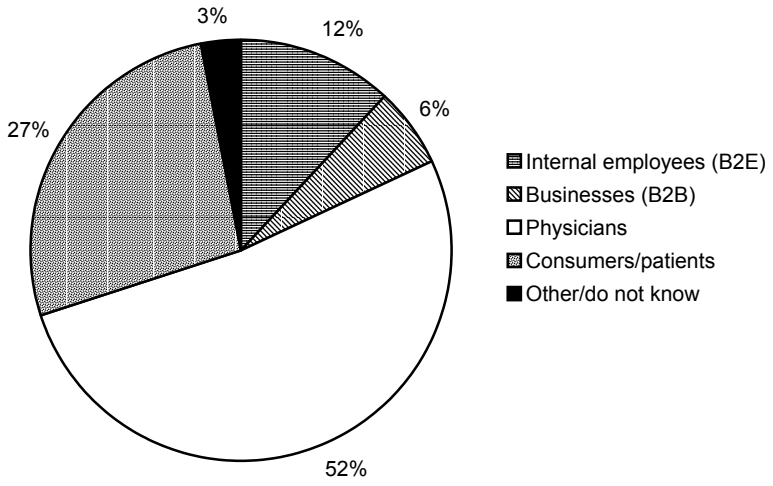
Figure 2.1: e-Nabling the pharmaceutical process across the value chain



Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

Given the significant emphasis given to marketing and sales, it is not surprising that the Internet is already used heavily for Web-enabling the management of external relationships. Web-enabling initiatives are predominantly targeted at medical professionals (~50%), followed by consumers/patients (27%). Internal employees are the top priority for 12% of companies, for example through CRM efforts, while (external) businesses are relevant only for a few (6%) (see Figure 2.2).

Figure 2.2: Who is targeted most by your e-nabling company initiative?



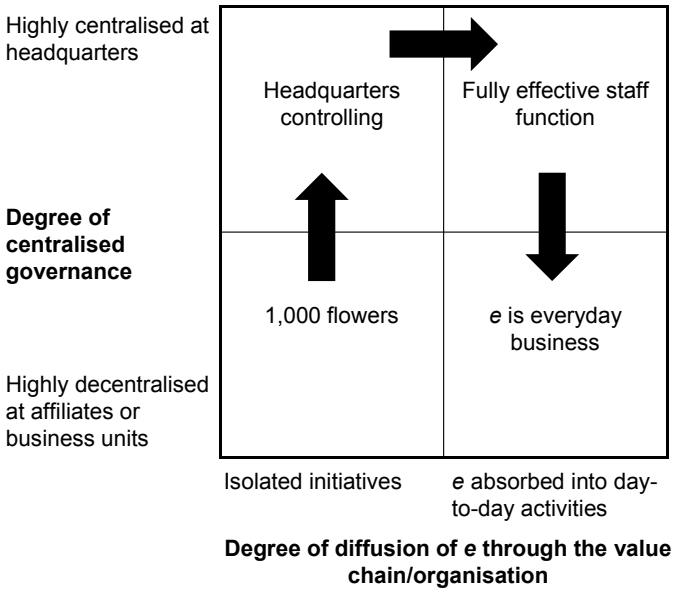
Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

ORGANISATIONAL ISSUES

Pharmaceutical companies need to decide about the optimal mix of different organisational approaches, such as e-venture units, central e-business teams and local e-marketing resources. While companies have chosen different approaches, most have established a central e-business team. As outlined by Cap Gemini Ernst & Young and INSEAD, the industry is transitioning from isolated and decentralised initiatives, the so-called 1,000 flowers approach, into a highly centralised approach controlled by headquarters.[21] Few companies have started to absorb the Internet into day-to-day activities, characterised by a central team working with affiliates to scale up pilots and tailor solutions to local environments (see Figure 2.3).

[21] Cap Gemini Ernst & Young and INSEAD, *Vision & Reality: The Quantum Shuffle – the impact of e on the pharmaceutical and medical devices industry*, 2001.

Figure 2.3: Evolution of organisational models used for e-implementation



Source: Cap Gemini Ernst & Young and INSEAD, 2001

Independent e-units

Sixty-one per cent of companies have by now implemented central e-business teams, as outlined by Cap Gemini Ernst & Young and INSEAD.[22] However, only 11% have already set up e-venture units. European pharmaceutical companies have not yet adopted the approach of US companies to build e-venture units, such as Merck and Eli Lilly did. According to Cap Gemini Ernst & Young, Johnson & Johnson and Roche Diagnostics also have venture funds, with the objective of seeding ventures that could potentially revolutionise the industry's business processes. Managers from companies that did not install such funds do recognise the value, as outlined by quotes from Cap Gemini Ernst & Young and INSEAD:[23]

> *We would like very much to have a seed fund available, to be more flexible and quicker in investment decisions.*
>
> *I am very jealous of companies that have set up their own venture capital funds. I don't have any funds directly available and have to convince others in the organization to invest before I can move forward.*

According to Cap Gemini Ernst & Young and INSEAD, almost a quarter of surveyed companies still need to establish a corporate strategy. We assume that these are predominantly medium-sized companies, based on our Informa–almasan

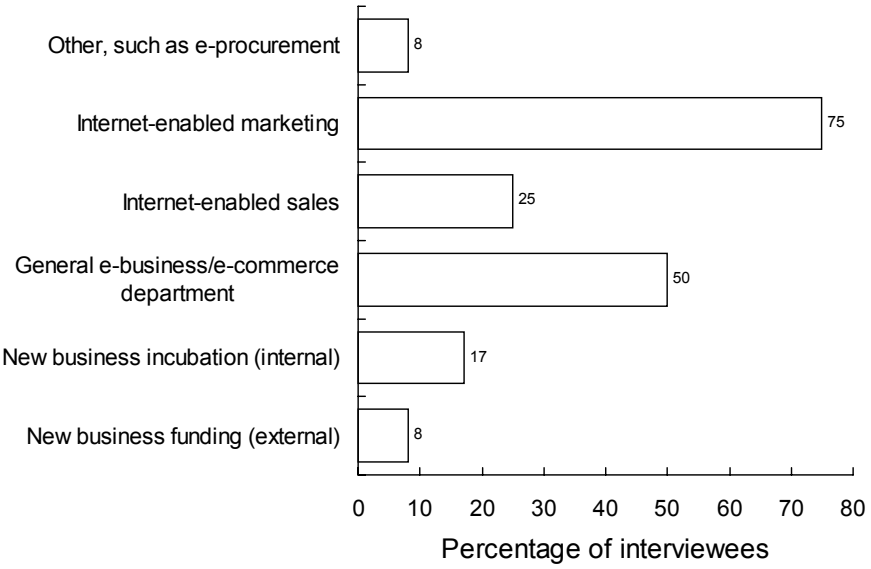
[22] Cap Gemini Ernst & Young and INSEAD, *Vision & Reality: The Quantum Shuffle – the impact of e on the pharmaceutical and medical devices industry*, 2001.
[23] Cap Gemini Ernst & Young and INSEAD, *Vision & Reality: The Quantum Shuffle – the impact of e on the pharmaceutical and medical devices industry*, 2001.

pharmaceutical survey. Medium-sized companies lack the funding resources to mirror the e-business unit approaches of their larger competitors, and focus occasionally on the important e-marketing area only. Since e-marketing is affected most by the Internet, and is complex enough as outlined in this report, it is sensible to focus scarce resources on it. Hence, 75% of respondents in our survey confirmed the existence of specific e-marketing units, usually at the regional/local level. In large companies, e-marketing units exist in parallel to the general e-business/e-commerce departments. In addition to external venture funds, large pharmaceutical companies have also invested their resources into internal e-business incubation capabilities (see Figure 2.4).

Leonard Starnes from Schering AG has provided some guidelines for medium-sized pharmaceutical companies that want to develop an e-marketing organisation:[24]

- balance central direction with regional flexibility, by applying a hybrid e-marketing organisation[25]
- hire e-marketing talent from outside and use management consultants
- integrate e-marketing at regional or business unit (BU) level into marketing goals.[26]

Figure 2.4: What independent e-units exist within your company?



Source: Informa–almasan pharmaceutical survey, 2001

[24] Leonard Starnes, Head of Emerging Market Technologies, Europe, Schering AG, 'How should pharma best organise for e-marketing: globally; regionally; locally?', presented at IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.
[25] Central responsibilities can be strategic guidance, infrastructure, knowledge management, global initiatives, standards and performance metrics, and global partnerships.
[26] Regional or BU responsibilities can be strategy customisation, organisational build-up and initiative implementation.

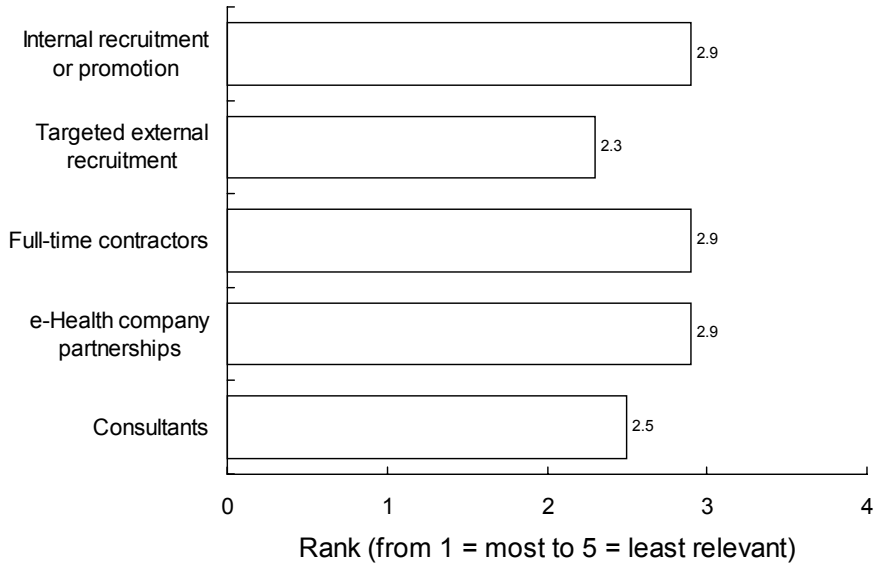
Implementation considerations

Given the resource needs of pharmaceutical companies, it is interesting where pharmaceutical companies are sourcing their required e-skills. In our survey, pharmaceutical managers put targeted external recruitment as the most important source, before consultants, confirming Leonard Starnes' advice. Other sources, such as full-time contractors, e-health partnerships and internal recruitment or promotion, all ranked approximately the same (see Figure 2.5).

During our Barcelona survey, we also asked how companies are implementing their e-nabling initiatives. Less than 10% immediately launch their initiatives globally. Most implement a pilot first, which focuses either on a specific local geography (39%) or a specific disease/product (29%). For some initiatives, companies chose to pilot the approach first with a specific function (10%) (see Figure 2.6).

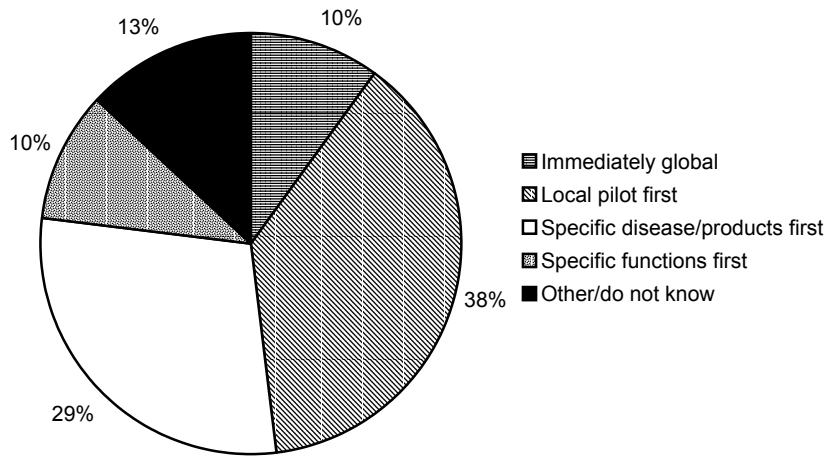
As outlined above, most companies choose to implement their initiatives locally first. Given the local nature of healthcare, the differences across Europe are immense, especially for initiatives involving some e-health components. Scandinavia and the UK are considered by a majority of pharmaceutical representatives as the emerging e-health leaders. Interestingly, some countries in southern and eastern Europe are also expected to become leaders, despite their sometimes low Internet penetration among the general population. While few people mentioned Germany, France was not considered by anyone to become the future e-health leader (see Figure 2.7).

Figure 2.5: What have been the most important sources of new full-time equivalents (FTEs)?



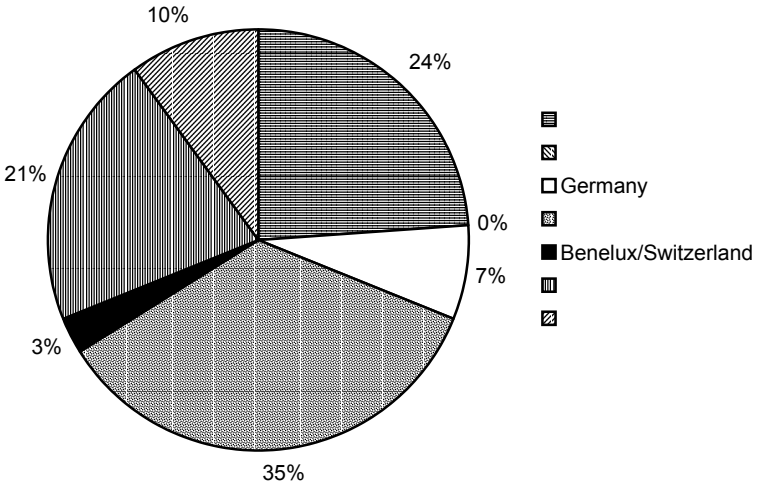
Source: Informa–almasan pharmaceutical survey, 2001

Figure 2.6: How do you typically implement e-nabling initiatives?



Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

Figure 2.7: Which European country will become the e-health leader?



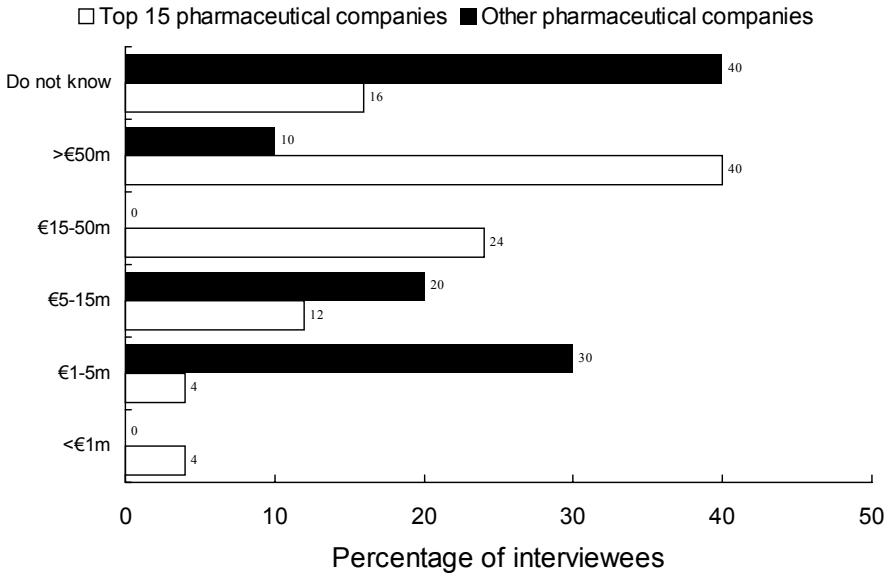
Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

FUNDING REQUIREMENTS

According to Cap Gemini Ernst & Young and INSEAD, the pharmaceutical and medical devices industries have invested approximately 0.5–1% of sales – approximately $2bn annually – on e-business.[27] For the top 15 pharmaceutical companies this can translate into budgets in excess of €50m. Medium-sized pharmaceutical companies cannot cope with the investment levels of their larger competitors, and have significantly fewer resources at their disposal. Half of them are investing below €15m annually, the majority of which are investing under €5m. Interestingly, 40% of respondents from medium-sized pharmaceutical companies did not know their company's global budget for e-business (see Figure 2.8).

The magnitude of resource commitment can also be measured in the number of full-time employees dedicated to e-business. As is the case with financial budgets, there is a large discrepancy between the top 15 and medium-sized pharmaceutical companies. The majority of respondents from the top 15 pharmaceutical companies indicated that they employ up to 50 and more people, including external parties, for their e-business activities. In contrast, more than two-thirds of medium-sized companies have between 6 and 20 employees, including external parties (see Figure 2.9).

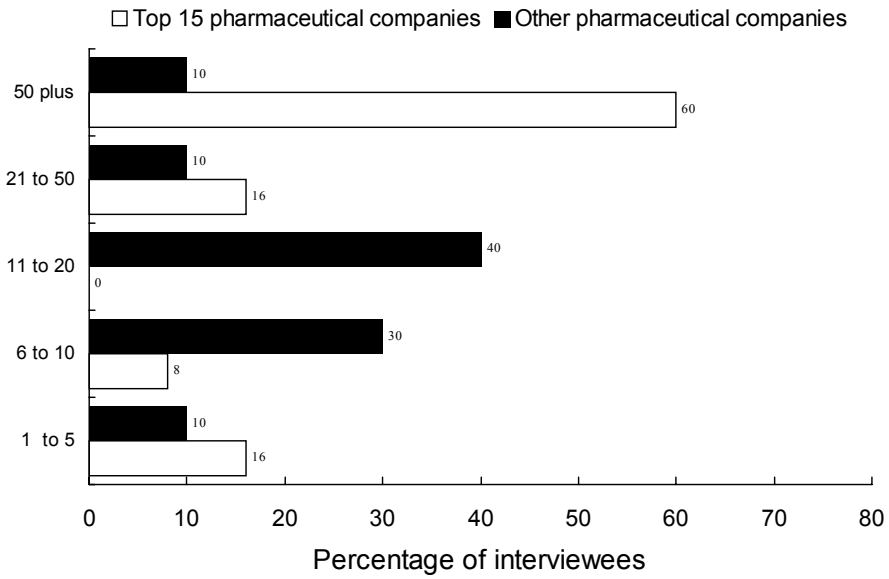
Figure 2.8: What is the size of your company's global e-business/e-commerce budget?



Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

[27] Cap Gemini Ernst & Young and INSEAD, *Vision & Reality: The Quantum Shuffle – the impact of e on the pharmaceutical and medical devices industry*, 2001.

Figure 2.9: How many full-time employees are dedicated to e-business/ e-commerce in your company?



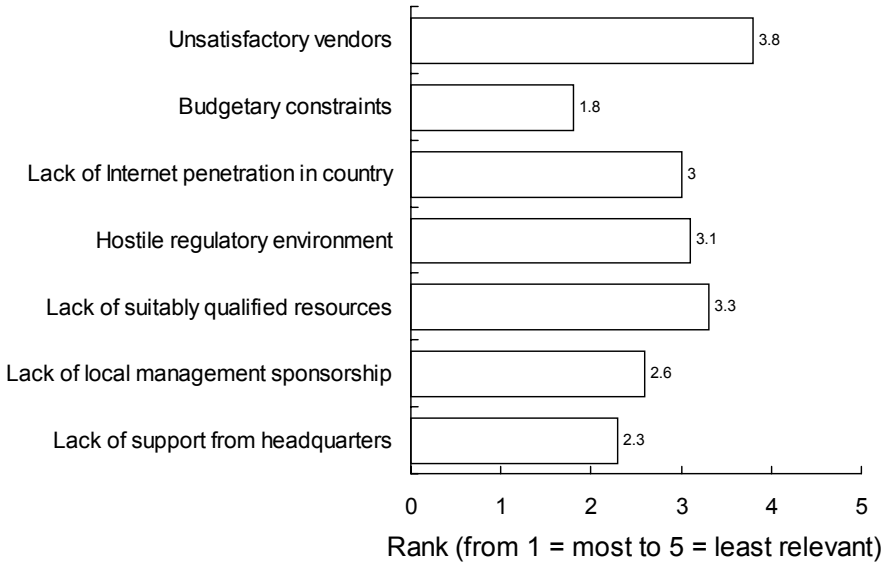
Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

While the aggregated funds look impressive, budgets at the country/brand level are more indicative of the degrees of freedom. Owing to the dispersion of funds across countries and/or products, it is not surprising that budgetary constraints are still the most important obstacle to achieving e-marketing goals. Clearly, local pharmaceutical managers expect some sort of sponsorship from their headquarters, both in terms of budgets and implementation support. Unless the costs of experimentation are clearly outlined, and taken off the bottom line of local management, global e-business/e-marketing staff will complain about the lack of local management support. Once ROI can be measured,[28] local management will start including the winning approaches automatically (see Figure 2.10).

To spur experiments and identify the winning approaches quickly, pharmaceutical companies will have to identify ways to share costs for new experiments across fragmented Internet budgets. The current spending level on the Internet – usually below 5% of marketing budgets, an equivalent of less than €0.5m per country/product – makes the available budgets too small for major undertakings, such as Internet-based compliance or disease management programmes. This is a typical European problem, since the US market is sufficiently large to shoulder such expenses alone. A remedy to the problem might be the assignment of funds, at the corporate level, which are reserved for larger experiments. Some pharmaceutical companies have decided to invest €5m–10m through a centralised approach, tasking their e-business/e-marketing experts to allocate the funds to the most advanced product managers pushing for new approaches. Since the goal of such investments is the creation of showcase successes for application across the company, it is important to identify and back the early adopters, as they will become the future 'evangelists' for the roll out.

[28] According to Cap Gemini Ernst & Young and INSEAD, 25% of their survey participants cited 'measurement of ROI' as a barrier to effective e-implementation, making it the second reason after cultural change (33%).

Figure 2.10: What have been the primary obstacles to achieving business unit e-marketing goals?



Source: Informa–almasan pharmaceutical survey, 2001

CONCLUSION

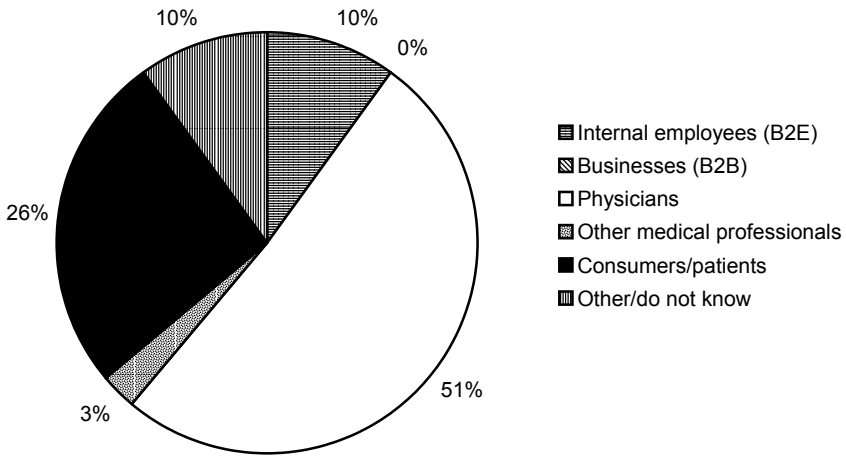
The challenge for pharmaceutical companies starts with the decision on how to organise and assign responsibilities for e-business, and, more specifically, e-marketing and sales. European pharmaceutical companies have not yet adopted the approach of the US companies Merck and Lilly to build e-venture units, but have already implemented separate functions for e-business, and increasingly for e-marketing and/or e-sales. Almost all top pharmaceutical companies have been creating large global e-business organisations with up to 50 or more employees globally, including external parties. The costs for these global e-business efforts can surpass €50m per company. The medium-sized pharmaceutical companies are typically investing under €15m, with organisations of approximately 6–20 employees, including external parties. However, despite all the commitment, lack of budgets has still been the most important obstacle to achieving e-marketing goals, owing to the dispersion of funds across countries and/or products. Where no specific e-marketing and sales budgets have been put aside, usually 5% or less is spent on Internet activities, leaving a meagre €0.5m for local country/product initiatives. Lack of commitment makes Internet budgets fragile, and among the first to be cut at the local level, which calls for a centralised approach to fund costly experiments.

CHAPTER 3: EMERGING e-MARKETING TACTICS

Since few success cases have been reported yet, pharmaceutical companies are still searching for the winning approaches to online marketing. It is not even clear yet how to segment Internet marketing initiatives. Are the customer, disease, geography or any other dimensions most relevant? Based on the two surveys conducted with pharmaceutical managers, these issues are highlighted, enriched with concrete European case examples, and comments are made based on extensive desk research.

In our Barcelona survey, the attendees were asked who they target most with their online marketing and sales initiatives. For more than 50% of the pharmaceutical representatives, the physician is the focal point, while about 25% are targeting predominantly consumers/patients. This is not surprising, given the strict DTC regulation in Europe. The remainder is focused on internal employees (B2E), for example through CRM initiatives or e-learning programmes, or other healthcare professionals; businesses are not targeted as a top priority (see Figure 3.1).

Figure 3.1: Who do you target most with online marketing and sales initiatives?



Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

SEGMENTATION OF e-MARKETING INITIATIVES

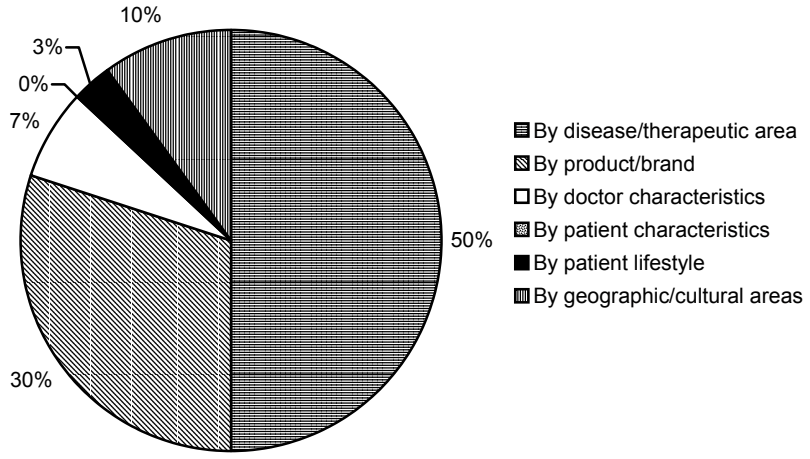
According to our Barcelona survey, e-marketing initiatives are predominantly segmented by disease and therapeutic area (50%), followed by product or brand (30%). Geography (10%) and doctor characteristics (7%) are deemed less relevant, while patient characteristics and lifestyle are deemed not relevant at all (see Figure 3.2).

Pharmaceutical companies have invested heavily in proprietary disease/therapeutic area Websites, which cover most of their strategic franchises. A case in point is AstraZeneca,

which, according to Simon Quayle, Global eMarketing Manager at AstraZeneca, has implemented, among others, the following disease and therapeutic area Websites:[29]

- www.incirculation.net (cardiovascular for healthcare professionals and patients)
- www.bco.org (breast cancer for healthcare professionals)
- www.uronet.org (prostate cancer for urologists)
- www.gastrosource.com (gastroenterology for healthcare professionals)
- www.gut-reaction.co.uk (Gastro-oesophageal Reflux Disease for UK consumers/patients)
- www.az-air.com (asthma, COPD, and rhinitis for healthcare professionals)
- www.actioncns.com (CNS for healthcare professionals and consumers/patients)
- www.halsbrann.com (GI site for consumers/patients and healthcare professionals in Norway)
- www.pollenvarsel.com, www.inneklima.com (asthma/allergy sites for consumers in Norway)
- www.linkmedica.com (Asthma Management Service to optimise care).

Figure 3.2: What is the primary segmentation for e-marketing and sales initiatives?



Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

[29] Simon Quayle, Global eMarketing Manager, AstraZeneca, UK, 'Reaching customers and consumers in the Internet age', presented at IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.

It is interesting that the customer, physician or consumer/patient seems not to be the focal point when segmenting e-marketing initiatives in the pharmaceutical industry. The consumer/patient is viewed only through a disease or product lens, as pointed out by one healthcare executive at the Healthcare 2020 platform held at INSEAD:[30]

> *Often when we talk about the consumer, we talk about people as though they are a disease. They are a diabetic, or an asthmatic, or they are a something.*

The industry also ignores the customers' desire for independent information from unbiased providers, such as university clinics and physicians' associations. Both consumers and physicians understand the inherent bias in the information provided by pharmaceutical companies, and want to obtain a balanced view on all treatment options, including competitors' products. InPharm has warned pharmaceutical marketers – based on US research in its 'World Review 30 May 2001' – to ignore the lessons at their own peril when developing an e-business marketing strategy:[31]

> *Few [doctors] regularly visit Pharma websites,*[32] *and only 1.7% of doctors in the Datamonitor POINT study*[33] *cited corporate sites as their first choice for obtaining medical or product information. To quote directly, Datamonitor believes that, in the short term at least, physicians will continue to distrust information on company sites, irrespective of content.*

Pharmaceutical companies will have to identify winning partnerships with trusted, independent e-health players, such as university clinics, physician or patient associations, and portals (see Figure 3.3). These partnerships can be used to offer community platforms and drive visits to company-specific Websites. Unfortunately, the most credible partners – university clinics and physician/patient associations – are not yet able to conduct complex Web initiatives. NetDoktor, a commercial portal, already successfully offers community sponsorships on its Websites, such as:[34]

- Lundbeck's depression community across Europe
- Pharmacia's smoking cessation community in the UK, France, Denmark and Sweden
- Siemens' hearing community in Germany.

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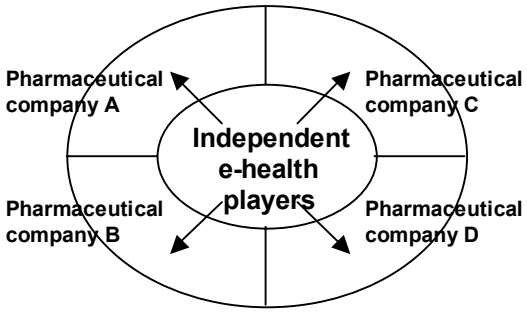
[30] See http://www.insead.edu/events/e-health/presentations/HMI200~1.QXD.pdf for a report.
[31] Dr Danny Tucker, Head of Medical Team, Doctors.net.uk, 'Effective online marketing to doctors', www.inpharm.com/worldreview/300501.html
[32] Talyor Nelson Sofres Healthcare, 'Patterns of usage of the Internet amongst GPs in the UK', March 2001, www.inpharm.com/netfocus/trends/articles_010.html
[33] Datamonitor, 'eSales strategies. Optimizing return on physician-targeted Internet expenditure', July 2000, www.datamonitor.com/productdetail.asp?id=DMHC1551&ref=Market%20Reports%20List
[34] Morten Bro Nielsen, Managing Director, Scandinavia, NetDoktor, 'Remote monitoring of chronic patients', presented at IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.

Figure 3.3: Partnerships with independent e-health players



Example partnership options
- e-Marketing service
- Sponsorships
- Traffic agreements
- Advertising

Source: almasan Limited

Product life cycle

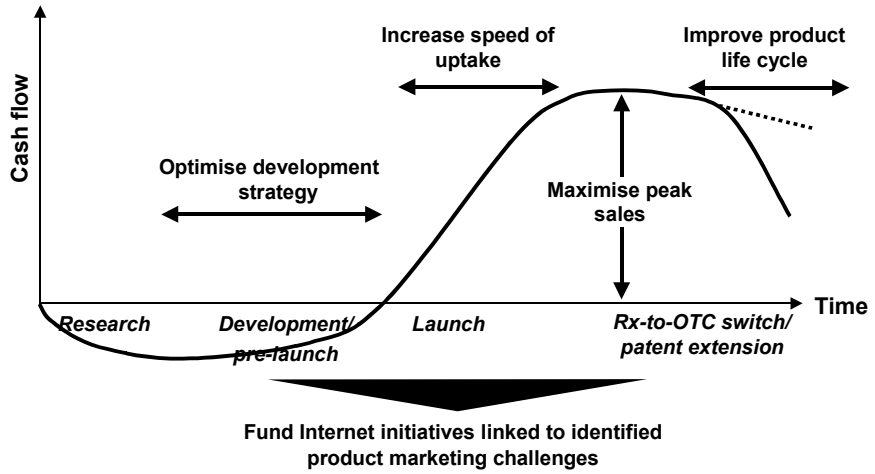
Initiatives can also be segmented by product life cycle. Marketers obviously have different objectives pre-launch than during launch, Rx-to-OTC switching or for products coming off patent. A short overview on the topic can be found in an article by Julie Denlinger from SimStar Internet Solutions.[35] Marketers can target different objectives in the product life cycle, with the added value that relationships can transform into lasting competitive advantage (see Figure 3.4).

During development and pre-launch, marketers have to rely on opinion leaders and specialists to shape the product with an optimum development strategy. The Internet can increase the quality of interaction with the companies' opinion leaders through specially designed extranets. In addition, regular qualitative research online, well-distributed e-clinical trials, online academic articles, online conferences, and interactive chats and bulletin boards can all be exploited to seed the market for new products.

At launch, pharmaceutical companies can exploit the Internet to increase the speed of uptake. Marketers can use activities such as e-learning programmes for the sales force. An automated approach for information diffusion during the critical launch phase increases the flexibility, and allows for quick reactions to any unforeseen issues. Ideally, pharmaceutical companies can tie such activities into a holistic customer relationship management process, translating changing marketing tactics into individual action plans based on extensive customer know-how. In addition, medical professionals should be given the choice of new channels of interaction, potentially reducing the burden on bottlenecks in the traditional communication channels, such as sales forces and medical information departments. Self-help functionality, such as e-sampling, e-detailing, e-Continuous Medical Education, e-Experience Trials and e-Adverse Event reporting can be offered, thereby increasing convenience for physicians. As an added benefit, precious company resources can be focused on prescribers still relying fully on traditional channels of interaction.

[35] Julie Denlinger, The link between the Internet and the product lifecycle. *Product Management Today*, August 2000, p. 55.

Figure 3.4: Objectives by product life cycle



Source: almasan Limited

To maximise peak sales, pharmaceutical companies can systematically attack all leakages in the patient/physician flow. Physicians' activities can be continued with initiatives similar to those during product launch, while self-help becomes more relevant once sales resources are shifted to the next product launch. Consumer/patient initiatives will usually demand more time to yield results. Increasing symptom, risk, disease and appropriate treatment awareness has proved an effective way to increase prescriptions in the US, because of favourable DTC regulations. In Europe, it can be used to increase the treated patient population, thereby expanding the overall market. When marketers are providing novel products for unmet medical needs, where patients do not seek adequate medical consultations, the Internet can become the medium of choice, especially when first-to-market products are the only treatment. In addition, low compliance rates in redeeming prescriptions (6–20%) and delaying or omitting doses (30–50%) are a formidable target for pharmaceutical companies to increase product revenues, and potentially market share.[36] In many diseases, non-compliance can reach 50% or more, such as for hyperlipidaemia, with treatment discontinuation reaching 50% in the first year and 85% in the second year.[37] Pharmaceutical marketers can support physicians in prescribing their products by ensuring compliance through automating patient–physician interactions and creating communities.

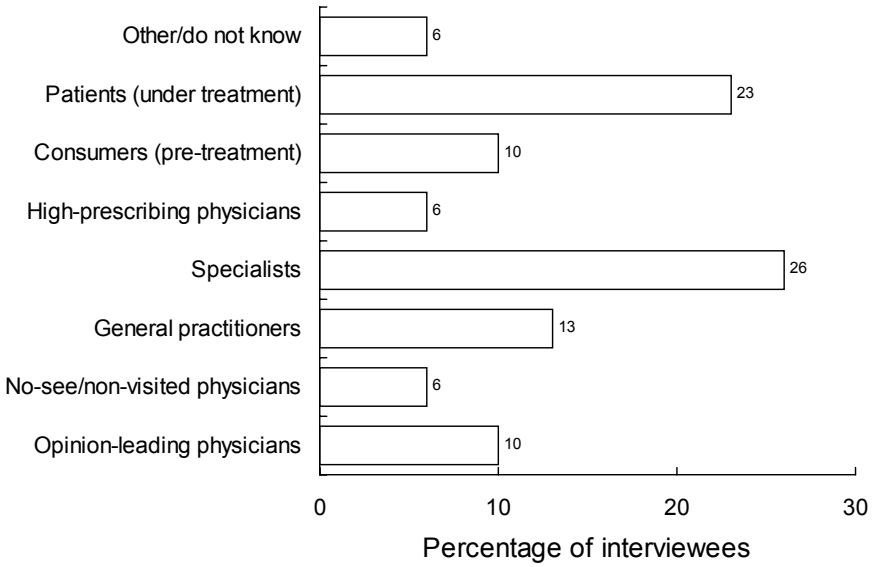
Finally, pharmaceutical marketers can use the Internet to improve the product life cycle. Increasing prescribers' loyalty before a product comes off patent might help to fend off competition from generics. Breakthrough, life-saving products can be associated with great successes and many saved lives, thereby reducing the risk of generic substitution through brand loyalty. For chronic products, patients can be targeted well in advance of Rx-to-OTC switches, generating a loyal customer base through the switching process.

[36] A. Giuffrida and D.J. Torgerson (1997) Should we pay the patient? Review of financial incentives to enhance patient compliance. *BMJ* **315**, 703–707.
[37] W. Insull (1997) The problem of compliance to cholesterol altering therapy. *Journal of Internal Medicine* **241**, 317–325.

Physician and consumer segmentation

For our survey at the IBC conference in Barcelona, we asked attendees to identify those marketing relationships that will be affected first. The pharmaceutical respondents rated specialists (26%) and patients under treatment (23%) highest, followed by general practitioners (13%) (see Figure 3.5).

Figure 3.5: Which relationships do you anticipate being affected first by the Internet?



Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

Ten per cent of the survey participants believed that opinion-leading physicians will be impacted first by the Internet. Leveraging opinion leaders for online activities, similar to the offline world, does indeed promise a powerful influence on specialists and GPs. With the increasing pace of innovation, specialists are increasingly relying on the Internet for their information needs, becoming the prime target for more than 26% of the participating pharmaceutical managers. Opinion leaders and specialists are the only truly 'global' segment addressable usually entirely in English. On the other side, GPs (13%) have to be targeted mostly through local initiatives. It is interesting that no-see/non-visited physicians have scored relatively low (6%). Traditionally, e-marketing suppliers in the US have pitched their services as a cost-effective channel to this underserved segment.

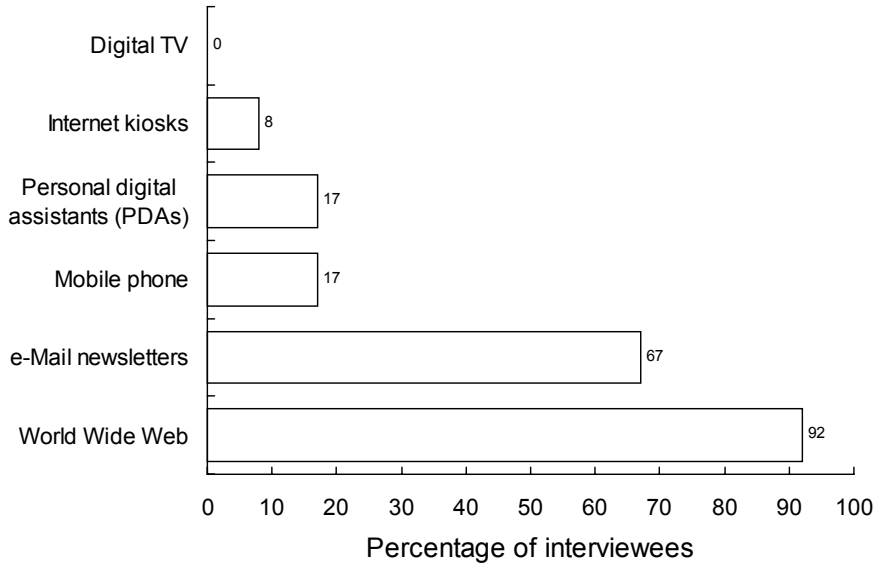
Reflecting the predominantly European focus of the pharmaceutical participants (approximately 75%), pre-treatment consumers scored low (10%). In most European markets, branded advertising to consumers is forbidden, thereby limiting the potential to make share gains from DTC marketing. Survey participants did not consider disease awareness campaigns as an attractive option, since spending benefits the overall category, including competitors. However, patients undergoing treatment are a key segment affected first by the Internet (23%), with the potential to increase compliance, and therefore market share. In addition, marketers should not forget that those seeking healthcare information also include individuals searching on behalf of others. According to a study conducted by P\S\L of more than 11,000 US i-

healthseekers,[38] partners, parents, sons/daughters, other relatives and friends/colleagues all represent potentially relevant targets.

EMERGING SPENDING PATTERNS

Besides the Internet and e-mail newsletters used by everyone, only 17% of surveyed marketers have started to leverage mobile phones (WAP) and personal digital assistants (PDAs) (see Figure 3.6).

Figure 3.6: What interactive devices have been utilised in realising your e-business strategy to date?



Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

Among e-health suppliers, first use has already been reported for care services, for example for home monitoring of children with asthma, as offered by NetDoktor.[39] Nokia is already looking at mobile telehealth, to provide healthcare services through mobile access.[40] European services, presented at the IBC conference 'mHealth-europe' on 23 May 2001 in Barcelona, include:

- PocketDoctor by HealthAmigo, providing multi-platform services (Internet, WAP, digital TV)[41]

[38] I-PT Module A, 'Patients and the Internet', February 2001, P\S\L Research, www.main.pslgroup.com/psl.nsf/I-healthseekers
[39] Morten Bro Nielsen, Managing Director Scandinavia, NetDoktor, 'Remote monitoring of chronic patients'.
[40] Kalervo Lahtela, Nokia Networks, 'Mobile telehealth: healthcare services through mobile access'.
[41] Andrew Hull, HealthAmigo, 'PocketDoctor: the world's first wireless doctor in your pocket'.

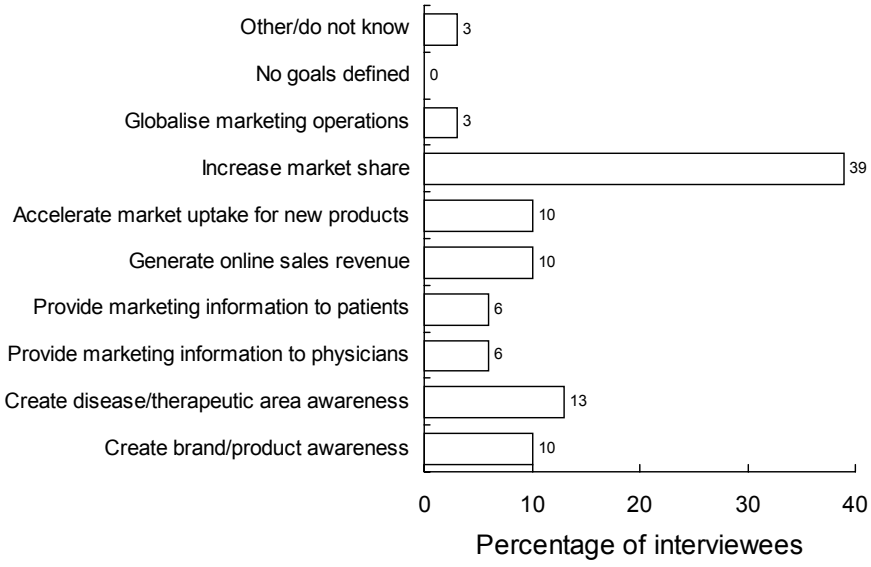
- mobile e-business solutions for the pharmaceutical sales force by Hewlett Packard[42]

- mobile solutions for consumers and chronic patients by bioDeo.[43]

Marketing and sales goals

When asked what are the most important marketing and sales goals that pharmaceutical employees want to achieve with the Internet, they put increase in market share as the highest priority (39%) (see Figure 3.7). This answer is not surprising, since the competitive pressure in the pharmaceutical industry has increased and pharmaceutical companies are becoming highly competitive. This is best evidenced by a rule that Thomas Ebeling, CEO of Novartis Pharma, presented to his marketing, sales and business managers:[44] 'Do whatever it takes – kill to win, no prisoners.' The rule was subsequently changed to a more politically correct version: 'Do whatever it takes – Fight to Win.' But the message remains the same; European pharmaceutical companies need to be more aggressive in their marketing and sales efforts to cope effectively with their US competitors.

Figure 3.7: What is the most important marketing and sales goal to achieve using the Internet?



Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

[42] Amjid Murtza, Hewlett Packard Consulting, 'Integrating your sales and marketing channels through mobile technology'.
[43] Adam Hanina and Franck Tricot, bioDeo, 'Prescription for success: how Bluetooth will change the healthcare industry'.
[44] http://www.onlinereports.ch/EbelingSloganZurueck.htm

The remaining respondents ranked creating disease/therapeutic area awareness (13%), creating brand/product awareness, generating online sales revenue, and accelerating market uptake for new products (each 10%) as a top priority. Only a minority supported the provision of marketing information to physicians and patients, and globalisation of marketing operations as the most important marketing and sales goal.

While the goal of increasing market share is a usual approach to competition in pharmaceutical marketing and sales, it is not clear how it can be translated into effective online initiatives. A classical attempt has been to capture relationships long term, for example by providing therapeutic area and disease Websites to physicians. However, it is questionable whether pharmaceutical companies will be able to maintain the momentum for such initiatives, given the demand for independent information.

More advanced approaches have been tried by Aventis, with its Website www.zinapse.de targeted at physicians interested in neurology, and Novartis with www.novartis-classics.de, a virtual VIP club for physicians. According to Thomas Hoegn from Aventis, Germany, the www.zinapse.de Website is designed to cover three products targeted at neurologists and psychiatrists, with annual sales of about DM60m.[45] With the help of DocCheck® Medical Services, Aventis, Germany, implemented an advanced loyalty programme, similar to the frequent flyer programmes offered by airlines. Physicians can redeem MediMiles for a range of exquisite food products (approximately 1,500–7,500) or practice-relevant items (approximately 1,000–20,000), once they have obtained the necessary miles through activities such as:

- filing a case report (2,500)
- making a topic proposal (100)
- filling in a survey (1,000)
- participating in a product quiz (500)
- subscribing to a newsletter (50)
- referring the site to friends or colleagues (30).

It will be interesting to see how the Aventis effort will evolve. From the approximately 1,500 physicians who were contacted, 15% agreed to receive the newsletter. On average, 90 physicians visit the site daily, increasing to 300–400 a day if the site is advertised in a medical journal. Aventis will be able to measure the impact on sales continuously. If the initiative proves successful it has great potential to be applied to many mature products, which still consume precious sales resources. These resources might be freed up, after appropriate investment in an Internet sales platform, leading to a readjustment of the marketing and sales mix.

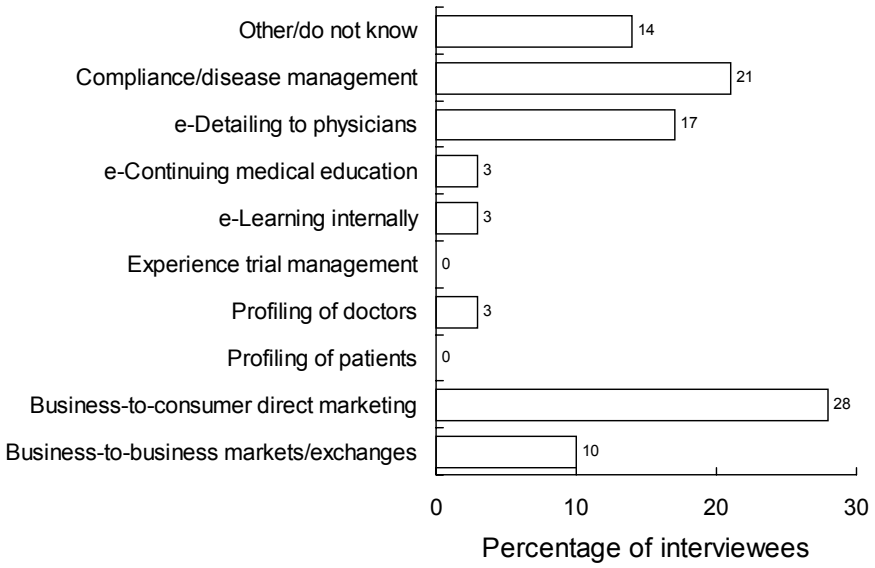
[45] Dr Thomas Hoegn, Aventis, Germany, 'eCRE initiatives', presented at IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.

Future killer applications

In our survey in Barcelona, pharmaceutical marketers where asked to identify the killer applications for online marketing and sales. They rated business-to-consumer direct marketing (28%), compliance/disease management (21%), and e-detailing to physicians (17%) highest (see Figure 3.8). Given the rumours published by the *Financial Times*[46] that the European Commission is proposing to relax the rules that prohibit pharmaceutical companies from promoting drugs for AIDS, asthma and diabetes direct to patients, DTC might become a reality in Europe quicker than anticipated. Compliance and disease management can already be supported by wireless technologies, and will increasingly benefit from the adoption of next-generation mobile technology. e-Detailing, such as that offered by www.iphysiciannet.com in the US, could become the 'mainstream way of doing business', as outlined by a third of participants in the Cap Gemini Ernst & Young and INSEAD survey.[47]

Business-to-business markets/exchanges were mentioned by 10% of the participants. Implementation of European exchanges for pharmaceutical products, similar to initiatives such as www.rxbazaar.com in the US, can have large consequences. The heterogeneous prices across EU member states will become highly visible after the introduction of the euro on 1 January 2002, and have already triggered proactive strategies across the industry.[48]

Figure 3.8: What will be the 'killer applications' for online marketing and sales?



Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

[46] Michael Mann, David Pilling and Nicholas Timmins, Brussels may ease curbs on drug promotion. *Financial Times*, 13 June 2001.
[47] Cap Gemini Ernst & Young and INSEAD, *Vision and Reality: The Quantum Shuffle – the impact of e on the pharmaceutical and medical device industries*, 2001.
[48] Scrip Reports, 'Preparing for EMU: strategies for success in the pharmaceutical industry', July 1998, http://www.pjbpubs.com/scriprep/bs967.htm

CONCLUSION

As DTC is still prohibited in Europe, physicians are the focal point of more than 50% of companies, while about 25% are targeting predominantly consumers/patients. The remainder is focused on business to employee (B2E) or other healthcare professionals. e-Marketing initiatives are predominantly segmented by disease and therapeutic area (50%), followed by product or brand (30%). Geography (10%) and doctor characteristics (7%) are deemed less relevant. This has led to a proliferation of proprietary disease and therapeutic area Websites by pharmaceutical companies. In future, pharmaceutical companies will need to focus more on the customer, physician or consumer/patient, and enter into partnership with e-health players to acknowledge their customers' desire for independent information. Pharmaceutical marketers believe that their relationships with specialists (~25%), and patients under treatment (~25%) will be impacted first, followed by GPs (13%). Besides the Internet and e-mail newsletters, used by everyone, few marketers have started to leverage mobile phones (WAP), or personal digital assistants (PDAs). The major online marketing and sales objective – increasing market share – (~40%), is difficult to translate into concrete Internet marketing initiatives. First attempts to capture long-term physician relationships through physician loyalty programmes have been initiated in Germany by both Aventis and Novartis. Business-to-consumer direct marketing (28%), compliance/disease management (21%), and e-detailing to physicians (17%) are believed to be the future 'killer applications' of online marketing and sales.

CHAPTER 4: e-MARKETING STRATEGY – A THREE-STEP DECISION

In most companies, product champions select both their marketing mix and the specific e-marketing initiatives, usually working within the confines of a limited online budget. Only few companies have put aside significant funds to experiment with e-marketing. In our pharmaceutical company survey, almost 60% of respondents claimed that existing functional departments make e-business decisions. This has led to a plethora of new, mostly uncoordinated e-marketing initiatives. According to Leonard Starnes, Head of Emerging Market Technologies, Schering AG, this is no longer sufficient,[49] because it has led to:

- duplication of effort, lost synergies
- inadequate resourcing, sub-standard initiatives
- absence of knowledge sharing, isolated islands of expertise
- few initiatives aligned with business objectives.

Thanks to a wide range of experiments, some pharmaceutical marketers have already achieved occasionally interesting results. Unfortunately, what has failed to emerge so far is a standardised approach towards strategic and tactical decision-making that incorporates the lessons learned from successes and failures. The highly competitive environment, which was also cited many times as a reason for not participating in our survey, has made it difficult to learn collectively and discard unsuccessful approaches quickly.

Pharmaceutical companies will be challenged to upgrade the strategic and tactical skills of all individuals involved in e-marketing decisions quicker than spending will pick up. Otherwise, the industry will run the risk of spending increasing funds with little impact. We propose a simple three-step decision-making framework to ensure high-quality decisions. Most companies will have to train their marketing managers on the opportunities the Internet provides, by asking the right questions and by formalising the marketing planning through templates, which already exist for offline marketing plans.

THREE-STEP DECISION-MAKING FRAMEWORK

When undertaking any e-marketing initiative, marketers have to make difficult choices across three specific axes. For optimal effect, however, they also have to combine the individual initiatives into an overall online marketing programme. The three choices relate to the objectives, the approach and the external support for the e-marketing initiatives:

[49] Presented at IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.

1. *What is the objective of the interaction, and which target audience should be addressed?*

   We suggest the traditional patient/physician flow analysis to answer this question. However, because of the new interactive opportunities of the Internet, the appropriate actions might differ from the offline marketing and sales approach.

2. *How should the target audience be addressed?*

   We propose a decision-making framework to decide on the ownership and branding for the initiative. Companies will have to identify the best approach to reach their target audience and achieve their objectives, as identified above, and resist the temptation to 'control' all aspects directly.

3. *Who can help to make the initiative a success? (see Chapter 8)*

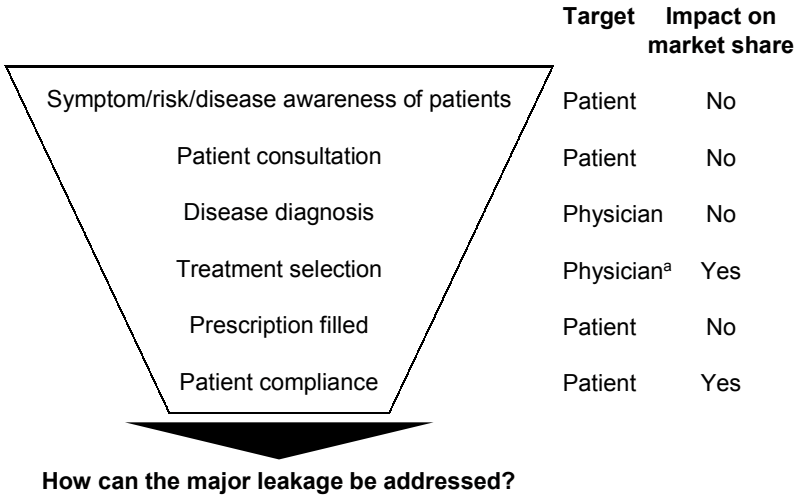
   Many companies have been formed to help marketers in their undertakings. In addition to their services, they already offer scarce implementation know-how. We will segment the potential partners into different categories, and discuss their ability to help in implementing successful e-marketing initiatives. Owing to the importance and relevance of the topic, there is an entire chapter on e-health supplier resources included in this report (Chapter 8). Internal marketing and sales departments should always be fully integrated into the implementation of e-marketing initiatives, since they can promote new initiatives very effectively by leveraging the traditional channels, such as the sales force.

Patient/physician flow analysis

A typical patient/physician flow analysis is used to identify the best marketing approach for the (offline) marketing mix (see Figure 4.1). We suggest using the same approach for e-marketing initiatives, while leveraging the additional opportunities presented by the interactive nature of the Internet. The beginning and end of European marketing activities are targeted at the patient, while the medical professional is the focal point in the middle. Because of stringent DTC regulations in Europe, all marketing and sales efforts before treatment selection by the medical professional do not usually lead to gains in market share. Measures to improve prescription filling, such as electronic prescribing, will also not impact market share. Pharmaceutical marketers can gain market share by increasing their patients' compliance above the industry average. According to Cyberdialogue,[50] US consumers who visited a site with disease-specific information became more compliant with their drug regimens, i.e. took their medication as prescribed on a regular basis. The leading condition groups include depression (22% increased compliance), asthma (18%), diabetes (17%), and heartburn (17%).

[50] www.cyberdialogue.com

Figure 4.1: Simple patient/physician flow analysis



[a] The assumption is that no DTC marketing is allowed.

Source: almasan Limited

Some European examples for Internet initiatives targeting specific steps in the patient/physician flow are listed in Table 4.1. Pharmaceutical companies prefer to use Scandinavia for piloting leading consumer/patient initiatives. The largest European markets, namely Germany, France and Italy, are also home to various initiatives. The UK is the most advanced country in transforming its healthcare system, thanks to the ambitious NHS IT strategy that has resulted in highly visible e-prescribing pilots.

The Internet offers fundamentally new, interactive approaches that are not available through other channels. Examples include patient/physician interactions, active communities and physician–physician interactions, such as:

- Patient–physician interactions for compliance and disease management

  Leading disease management companies, such as www.lifechart.com, exploit mobile input/output devices for fundamentally new approaches to chronic conditions, such as asthma, diabetes and cardiovascular complaints. The opportunities will proliferate further with the next technology wave being implemented, such as broadband and next-generation mobile.

- Active communities for peer support

  Pharmaceutical companies are using patient and relative communities to help each other with compliance (www.habitrol.com) or the difficulties of care giving (www.mswatch.com). The case example of Lundbeck's depression initiative (see Chapter 5) highlights the importance of credibility when trying to build a community.

- Physician–physician interactions

  Marketers have started to leverage opinion leaders online to influence large groups of interested specialists and GPs, a function more usually associated with symposia and congresses. They are using, among others, MedPanel's Medcast

Table 4.1: Internet initiatives impacting patient/physician flow		
Flow	**Product/disease**	**Sponsor/supplier**
Symptom, risk and disease awareness	Asthma and allergy	AstraZeneca, Norway[51]
Patient consultation	Depression	NetDoktor (sponsorship), Lundbeck, Denmark[52]
Disease diagnosis	Integrated Cancer Care Unit	Roche Diagnostics and Roche Pharma[53]
Treatment selection	Cardiology	SIEC (sponsorship),[54] Schwarz Pharma, Italy
Prescription filled	Electronic prescriptions	Pilots in UK with three consortia (e.g. SEMA)[55]
Patient compliance	Physicians promoting patient information	Aventis, Germany and France (through MyDocOnline)[56]
Source: almasan Limited		

services (www.MedPanel.com), and Conceptis' Cybersessions on its cardiology Website (www.theheart.org), in addition to many other tools available.

Branding and infrastructure ownership

The two main questions to be answered relate to the ownership and branding of the initiative. Marketers have to make a trade off between independence and company control. They also have to choose between a product- and a disease-branded site.

In terms of ownership, pharmaceutical companies have to resist the temptation to control initiatives, since too much control might jeopardise their targeted objectives. If they want superior access to the targeted audience they need to co-operate with independent associations or commercial portals. These organisations and companies have established relationships with the audience, and give access on a sponsorship, unrestricted grant, or fee-for-service basis.

Depending on regulations and objectives, marketers will have to decide whether branding initiatives should be based on a disease (soft branding) or a product (hard branding). While product branding offers the best opportunity for competitive marketing initiatives, disease branding is usually required to leverage independent and unbiased associations/portals. Many companies are undertaking initiatives to promote a set of products in the same therapeutic area, or targeting a specific

[51] www.pollenvarsel.com and www.inneklima.com
[52] http://community.netdoktor.com/ccs/dk/depression/index.jsp and www.depnet.dk
[53] http://www.roche.com/med-corp-detail-2001?id=631, SFr100m to be invested over 5 years addressing prevention, diagnosis and treatment; Internet plans not yet public.
[54] Societa Italiana di Ecografia Cardiovascolare, http://www.siecocardio.it/ie4/home.htm
[55] http://www.boots-plc.com/news/newspage.asp?NID=217
[56] IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona, Thomas Hoegn, Aventis Pharma, Germany.

physician segment on behalf of the overall company. In general, these initiatives neglect the patient and physician requirement for independent and unbiased information, as evidenced by multiple research. It will be difficult for pharmaceutical companies to compete with associations, portals and hospitals for a holistic relationship, and still remain focused on selling proprietary products. Examples of branding and infrastructure ownership are provided in Figure 4.2.

The attempt by pharmaceutical marketers to capture consumer/patient and/or physician relationships exclusively can best be compared with the impact the Internet had in another industry – financial services. Internet discount brokers have forced banks to make third-party mutual funds available to their clients, and have eroded trading fees substantially. They forced banks to give up their proprietary product portfolio in favour of maintaining the customer relationship online. When Merrill Lynch finally adopted the Internet, after being forced to do so by the stock market because of the perceived threat of discount brokers such as Charles Schwab, e*trade and even Quicken, it launched a highly successful counter-attack.[57] Today, Merrill Lynch has consolidated its offering into a single portal, www.mlx.com, and has fully leveraged its assets, such as featuring online video comments and interviews with its analysts. Similarly, pharmaceutical companies have highly valuable assets, such as ongoing access to physicians through their large sales forces. Pfizer has decided to use its 8,000 US sales representatives to promote a Web-based practice management service.[58] The company has announced a partnership with IBM and Microsoft to set up a separate venture that will challenge existing companies such as WebMD. The new entity will be independent, and will not be used to promote Pfizer's products or advertise to physicians.

Figure 4.2: Examples of branding and infrastructure ownership

	Company site	Independent site
Disease branded	• Consumer communities for severe conditions (e.g. www.depnet.dk) • Pharmacoeconomic and experience trials (e.g. www.projekt-xchange.de)	• Support of patient/ physician associations • Unrestricted educational grants for physician CME • Content sponsorships for consumer/physician sites
Product branded	• Consumer sites for lifestyle diseases (e.g. Viagra) • Patient compliance (e.g. www.Habitrol.com)	• Online market research • e-Detailing to physicians • Online experience trials

Source: almasan Limited

[57] E-strategy brief: Merrill Lynch, a reluctant success. *The Economist*, 9 June 2001.
[58] http://www.pfizer.com/pfizerinc/about/press/msibm.html

GENERATING IMPACT FROM e-MARKETING

According to Datamonitor, pharmaceutical marketers should not, at present, focus primarily on return on investment (ROI), but instead should investigate winning approaches through exploratory investments.[59] Such investments can be measured by monitoring exposure, customer data generation and interactivity rates. Strategic advantages, such as differentiation ability or relationship lock-in, can also represent viable objectives without immediate ROI.

Given the scepticism towards new approaches online, pharmaceutical marketers need to adopt a rigorous evaluation process on three different levels:

1. Agree up front on the objectives to be achieved.

2. Identify a set of meaningful quantitative impact metrics.

3. Select process measures to track ongoing initiatives until they go live.

Once agreed upon, pharmaceutical marketers can continuously track and evaluate their e-marketing initiatives. By sharing their know-how, they can identify best practices, leading to improvements in future e-marketing performance (see Table 4.2).

Table 4.2: Examples for measuring e-marketing initiatives

Level	Exploratory	Strategic	ROI
Agreed upon objective	Tested viability of company specialist portal	Improved relationships with leading opinion leaders	Increased product revenues through higher compliance
Quantitative metrics	Number of specialists visiting site at least twice a month	Number of monthly interactions with opinion leaders	Average change in treatment duration for participating patient
	Percentage of first-time visitors not returning during 2 months	Number of newly secured opinion leaders	Incremental revenues minus total initiative costs
Process measures	• Weeks of delay compared with planned launch date • External/internal resources against budget • Time between initiative launch and completion		

Source: almasan Limited

[59] Claudine Singer, *Pharmaceutical Marketing Online: future blockbuster communication strategies require upfront R&D*, Jupiter Communications, 11 July 2000.

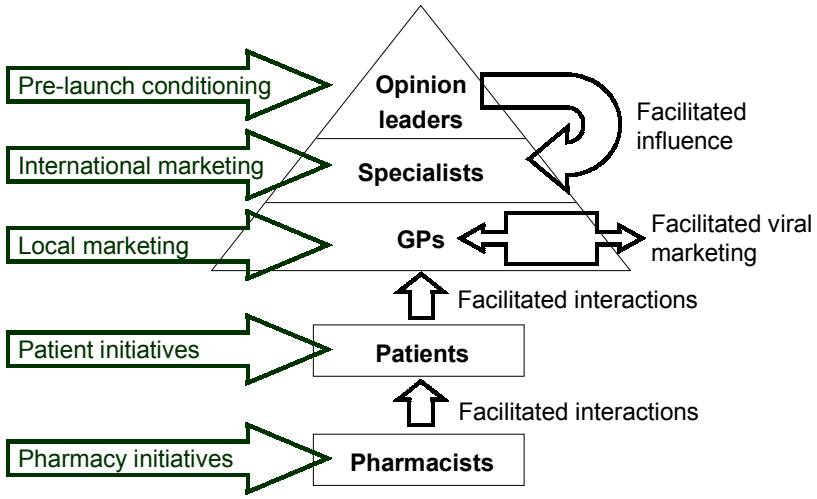
Integrated Internet marketing programmes

To be more than a reaction to the Internet, individual company initiatives to influence the patient/physician flow need to be combined into an overall Internet marketing programme. These programmes will depend on the life cycle stage of the product, and differ for pre-launch, launch, Rx-to-OTC and patent expiry. Even as they change over time, all programmes need a strategic consistency that unites content, presentation and interaction in a compelling fashion to achieve marketing objectives.

Let us focus on the most important step, the launch of a pharmaceutical product. Similar to offline launch programmes, where companies have adopted sophisticated approaches to target physicians and patients, they will have to adopt an orchestrated and carefully timed e-launch programme. It might start with pre-launch activities targeted at opinion leaders, and conditioning them to the new product. These opinion leaders are subsequently used to influence the relevant early adopters, who are interested in following opinion-leader discussions. The majority of prescribing physicians, specialists and/or GPs are targeted through suppliers of e-marketing and sales services, such as e-detailing, e-CME and online experience trials. Marketers can also exploit the Internet to facilitate viral marketing among those physicians. Depending on the product and local regulation, marketers will target patients with general awareness programmes, product branding initiatives and compliance/disease management initiatives. Finally, pharmacists can also be targeted, to increase compliance levels or avoid generic substitution (see Figure 4.3).

No one has yet implemented a rigorous approach to Internet marketing for a specific life cycle stage, such as the product launch example outlined above. Pharmaceutical marketers face the challenge that no e-health suppliers are equipped to provide a full one-stop solution. Currently, they need to be in the driving seat, identifying the different pieces of the puzzle to create the full picture. Then they need to put them together, which requires access to sophisticated technology resources. This significant hurdle cannot be overcome without pooled e-marketing skills or budgets, both of which are necessary in developing such an integrated approach for the first time.

Figure 4.3: Integrated Internet marketing programme for product launches



Source: almasan Limited

Skill upgrade and improvement of marketing processes

Since the Internet is not yet used comprehensively as a marketing channel, experience is scarce among product managers both at the global and country levels. Furthermore, members of senior management at country level often do not insist on having a thought-through Internet marketing strategy, since they are not yet familiar with the new channel. Without the necessary experience at the top, companies risk spending a lot of money on initiatives with questionable impact, such as static 'brochure' ware.

Therefore, pharmaceutical companies have to develop a systematic approach to upgrading the strategic and tactical skills pertaining to Internet-based marketing. The target audience consists of global- and country-level product managers, as well as country-level senior management, since they are all involved in proposing, challenging and deciding about the appropriate marketing and sales mix. Luckily, most companies have formed e-business, or e-marketing and sales units at the global or European level that have the necessary experience to implement an internal awareness and education programme. They should formalise the process by identifying and implementing the necessary training modules, such as those shown in Table 4.3.

Over time, pharmaceutical companies will have to complement existing marketing processes to include Internet activities. Global and local product teams responsible for such activities will be tasked to use the appropriate planning processes, which will be developed through experience with initial pilot approaches. Advanced pharmaceutical companies will not use the Internet solely as a marketing channel, but

Table 4.3: Examples of Internet marketing training modules

Target group	Objective	Approach
Global product management	Identify early adopters for new approaches	• Share best practices within industry • Propose decision-making framework • Offer ongoing support (and budget pool)
Country senior management	Generate local push and ensure 'quality control'	• Discuss strategic relevance and potential • Propose decision-making framework • Formulate checklist for local proposals
Country brand management	Upgrade Internet skills and identify local champion	• Share best practices within company • Propose decision-making framework • Offer support (e.g. sample plan, checklist)

Source: almasan Limited

will also adopt online workflow and collaboration tools. According to Johnson & Johnson,[60] the Internet has the potential to reduce costs for marketing materials up to 75%, while order processing can be reduced from a range of $3–75 to $1.5–3. The fast-moving consumer goods giant Procter & Gamble (P&G) has already teamed up with start-up Magnifi to form Emmperative,[61] offering Enterprise Marketing Management solutions. It is only a question of time before P&G and other companies systematically automate their marketing processes. Early adopters will benefit from capturing the institutional learning across individual products more effectively, and avoid loss of critical know-how through turnover among key personnel.

CONCLUSION

The pharmaceutical industry has started to invest in e-marketing initiatives, but there is not yet an agreed method for making strategic and tactical decisions. To ensure successful implementation of initiatives, pharmaceutical marketers will have to go through a rigorous decision-making framework, which we propose should encompass three steps. First, they need to define the objective and target audience of the initiative based on traditional patient/physician flow analysis. Second, they need to decide how to implement the selected initiative, selecting between soft and hard branding (disease versus product) and infrastructure ownership (independent versus company sites). Finally, they need to locate the ideal partner among the numerous e-health suppliers (see Chapter 8). Owing to widespread scepticism of e-marketing, marketers should apply a rigorous evaluation mechanism, which should include agreed objectives, corresponding quantitative metrics and process measures, until the initiative goes live. To maximise the impact of increased spending on Internet marketing, pharmaceutical companies will need to upgrade the skills of their marketing and management personnel. Therefore, global or European e-business/e-marketing experts will have to implement a comprehensive modular training approach. Long term, pharmaceutical companies will benefit most from the Internet by adopting integrated Internet marketing programmes, and by standardising and automating their marketing processes.

[60] Julie Steinberg, European eBusiness Manager, Johnson & Johnson Medical, UK, 'Medical devices and diagnostics global content strategy', presented at IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.
[61] http://www.emmperative.com/cgi-bin/elink/home.html?id=MNGfmJGT

CHAPTER 5: CASE STUDY – LUNDBECK'S DEPRESSION INITIATIVE

The case presented has been implemented in Europe. The framework for the case is presented in detail in Chapter 4, and consists of three questions to be answered when crafting a strategy:

1. What is the objective of the interaction, and which target audience should be addressed?

2. How should the target audience be addressed?

3. Who can help to make the initiative a success?

Lundbeck's depression initiative, currently implemented in Denmark (www.depnet.dk) and across Europe through a partnership with NetDoktor,[62] shows the benefits of a combined internal/external approach. It is targeted at consumers/patients trying to improve the recognition of depression as well as the notoriously low diagnosis and treatment rate. The Lundbeck case is based on a presentation at the IBC conference 'eHealth-europe',[63] provided by Julie Faltum, Corporate Communications Officer at Lundbeck in Denmark. In addition, Julie Faltum kindly supported the case write-up through an extensive interview, and gave input on the initial draft proposal. Without her invaluable help, for which we are very grateful, we would not have been able to formulate the insights provided.

DEPRESSION: LUNDBECK'S CORE FRANCHISE

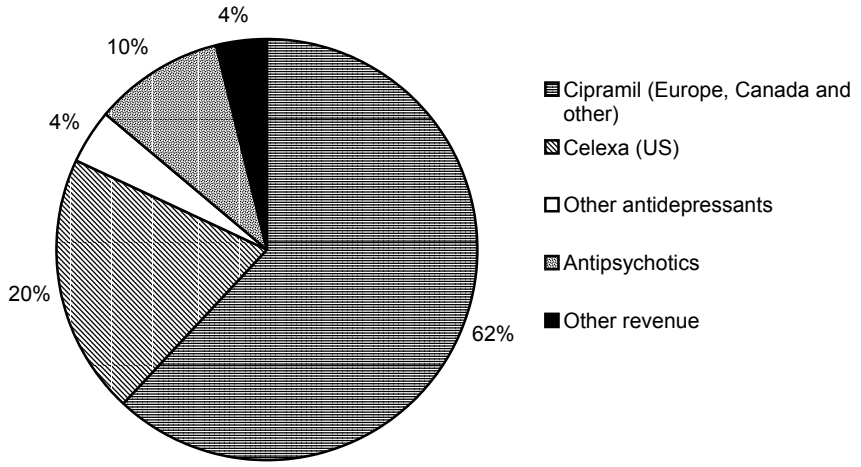
Lundbeck is a fast-growing medium-sized pharmaceutical company with head offices in Copenhagen and revenues of €753m in 2000. In the US, Lundbeck's products are marketed through a strategic partnership with Forest Laboratories. Lundbeck focuses on drugs targeting the central nervous system (CNS), more specifically psychiatry and neurology. Depression is the most important disease area for Lundbeck, thanks to its successful antidepressant citalopram,[64] a selective serotonin reuptake inhibitor (SSRI). Lundbeck generates 82% of its revenues from citalopram. Europe contributes the most with 62% (Cipramil®), while the US is increasing sharply, and already accounts for 20% of revenues (Celexa®), as shown in Figure 5.1.

[62] http://www.netdoktor.com/

[63] Julie Faltum, Corporate Communications Officer, Lundbeck, 'Strategies for developing an online depression community', presented at IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.

[64] Marketed under different brand names: Cipramil®/Celexa®/Seropram®/Cipram®.

Figure 5.1: Lundbeck's revenues in 2000



100% = €753m.

Source: *Annual report 2000*, Lundbeck, March 2001

Since citalopram is a racemic mixture containing the two enantiomers S-citalopram and R-citalopram, the company has developed a new drug using only the pure active enantiomer, S-citalopram. The new drug, called Cipralex™, will be launched during the second half of 2001, and further increases the importance of the depression franchise for Lundbeck. Lundbeck will need to convince the market that its new drug is more potent and generates earlier onset of action, thereby increasing patients' quality of life – an improved version of Cipramil.

DECISION MAKING: APPLYING THE FRAMEWORK

The case is presented using the three-step decision-making framework presented in Chapter 4. This does not imply that Lundbeck has used the framework explicitly, since it has been developed just for this report. However, the proposed decision-making framework is capable of drawing attention to some of the key decisions during the implementation, indicating that Lundbeck implicitly followed the simple three decision steps outlined below:

- objective and target audience are decided based on patient/physician flow analysis
- ownership and branding are chosen to maximise the impact, not control
- suppliers are selected based on rigorous assessment in the fragmented European e-health area.

The initiative presented here was originally initiated by corporate communication. The implementation and ongoing maintenance is tightly co-ordinated with marketing and sales, including the local subsidiaries. It also integrates the independent Lundbeck Institute,[65] whose objective is to improve, through education, the quality of life of those affected by CNS diseases. Since the Lundbeck Institute is highly respected by medical professionals as an independent authority, Lundbeck garnered substantial local support in Denmark for its Depression Network (DepNet) initiative.

Targeting patients and relatives to improve treatment

Depression is a highly researched disease among healthcare information seekers on the Internet. According to Deloitte & Touche, 19% of consumers/patients search for information on depression.[66] As Lundbeck is heavily focused on the patient as a stakeholder, striving to improve the quality of life for those suffering from psychiatric and neurological diseases, it has targeted patients and relatives online.

Analysis of the patient/physician flow discloses a striking feature, namely the low rate of correct treatment (20%).[67] It has triggered significant action from the World Health Organisation (WHO), as outlined by Dr Benedetto Saraceno, Director of WHO's Mental Health programme:[68]

> *We must strive for parity in the way mental and physical disorders are regarded. We know what is wrong, we know where solutions lie. We have a responsibility to push for changes in both policy and attitude and we are determined to do just that. 'Stop Exclusion – Dare to Care' will not be a theme that is highlighted in 2001 and then forgotten.*

While depression is still a stigmatised condition by both patients and healthcare professionals alike, Hara Estroff Marano describes in *Psychology Today*[69] the newest trends in medicine:

> *The newest evidence indicates that recurrent depression is in fact a neurodegenerative disorder, disrupting the structure and function of brain cells, destroying nerve cell connections, even killing certain brain cells, and precipitating cognitive decline. At the very least, depression sets up neural roadblocks to the processing of information and keeps us from responding to life's challenges.*

The gap between advanced medical opinion leaders, who are exploring the causes of depression, and the average patient and primary care physician is widening. Depression is still not widely acknowledged, either by patients or physicians, as a medical disorder that needs to be treated properly. Patient and physician organisations specialising in mental illness and depression, such as the Global Alliance of Mental

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[65] http://www.luinst.org/
[66] Deloitte & Touche, Health Care Centre of Excellence 2000.
[67] http://www.gamian-europe.com/gamian1.htm
[68] http://www.who.int/inf-pr-2001/en/pr2001-01.html
[69] Hara Estroff Marano, *Psychology Today*, March 1999, http://www.findarticles.com/cf_0/m1175/2_32/53985475/print.jhtml

Illness Advocacy Networks in Europe (GAMIAN Europe),[70] are targeting the problem. GAMIAN Europe's objectives are:

- To make the public more aware of the fact that:

    1. Mental illness is a medical disorder.

    2. All mental illnesses are treatable in the vast majority of cases (if an appropriate treatment is applied, improvement can be obtained in about 80% of cases).

- To make the public aware of the fact that, today, only 20% of those who suffer from mental disorders are treated in an effective and appropriate manner.

Rodney Elgie, the President of the Global Alliance of Mental Illness Advocacy Networks in Europe, has been especially committed to improving the situation for patients by educating them about their disease:[71]

> *Steps must be taken to ensure that depression gets the attention it deserves. With the help of patients we can help raise awareness of the illness and improve the level of support people with depression receive from their GP.*

The sad statistics on depression, as outlined in the article published in *Psychology Today*,[72] explain why a multitude of players, ranging from the WHO and patient and physician organisations to pharmaceutical companies, are stepping up their efforts to increase – from the currently low level of 20% – the number of people receiving proper treatment:

- the likelihood that a person will develop major depression or dysthymia in his/her lifetime is 6.1%

- the likelihood that a person will suffer some depressive symptoms in his/her lifetime is 23.1%

- the average age of first onset of major depression is 25–29

- the average duration of all depressive episodes is 20 weeks

- the percentage of patients who recover within a year after onset of symptoms is 74%

- the likelihood of a second or more episodes of major depression is 80%

- the median number of major depressive episodes during a patient's lifetime is 4

- the percentage of patients whose depression takes a chronic unremitting course is 12%

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[70] http://www.gamian-europe.com/gamian1.htm
[71] http://www.platform.co.uk/healthy/helthjones.html
[72] Hara Estroff Marano, *Psychology Today*, March 1999, http://www.findarticles.com/cf_0/m1175/2_32/53985475/print.jhtml

- the ranking of unipolar major depression among disabling diseases in Westernised countries is 2.

According to Julie Faltum, Lundbeck believes that only 10–20% of patients receive adequate treatment with a duration of 6 months or more. Major reasons for the troubling patient/physician flow are (see Figure 5.2):[73]

- Only 45% of patients suffering from depression are being properly diagnosed. Patients are missing out because either they do not seek medical help or physicians do not recognise their condition.

- Only 55% of diagnosed patients are treated with drugs. Patients are missing out because either they reject therapy through fear of side-effects or physicians do not prescribe the drugs.

Therefore, the key strategy behind Lundbeck's depression initiative is using the combination of patient pull, driven via online activities, with the traditional prescriber push taking place through the sales force. Since relatives are influential, they were also targeted along with the patients. Through the dual approach, Lundbeck expects to:

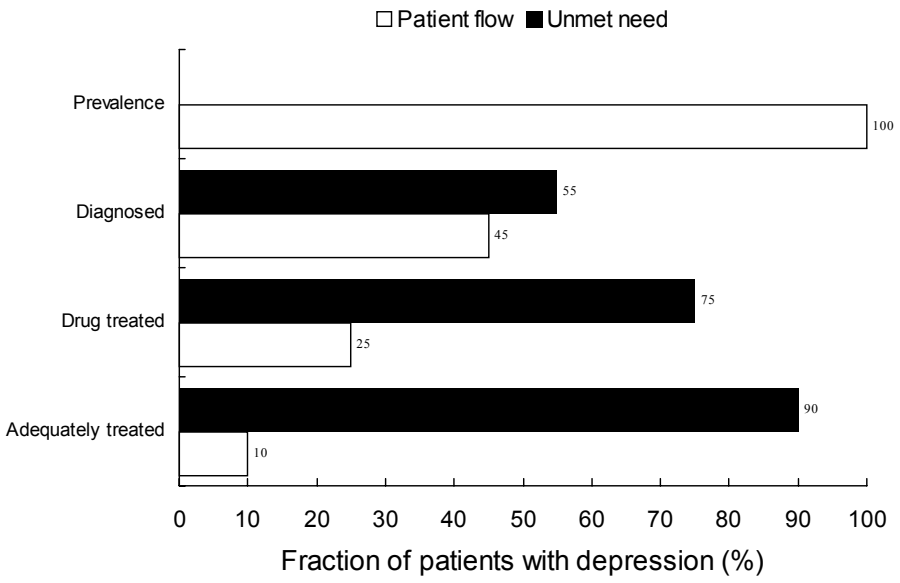
- improve awareness of depression

- reduce the stigma of depression

- make more people who are suffering from depression seek help earlier

- improve the management of depression.

Figure 5.2: Depression patient flow



Source: Decision Resources Inc., *Major Depression*, March 2001

[73] Decision Resources Inc., *Major Depression*, March 2001.

Applying a dual approach to increase impact

At first, Lundbeck focused only on an internal initiative. While the company was working on the benefits and risks of a Web initiative, it was approached by NetDoktor, which offered the sponsorship of a depression community in six major European markets, namely the UK, Germany, Austria, Denmark, Sweden and Austria. Subsequently, Lundbeck carefully evaluated the three options it faced:

1. Continue with its own initiative only.

2. Commit to sponsorship of NetDoktor only.

3. Go ahead with both approaches, i.e. sponsorship and an internal initiative.

To achieve the outlined objectives, Lundbeck recognised the importance of adopting a network communication model, since the Internet site had to cater for the community needs of patients and relatives, especially women. Only an ample network of content providers acting as 'ambassadors' promised to be successful in changing people's attitudes and behaviour. In its recent study on depression, Datamonitor confirmed Lundbeck's opinion that awareness campaigns are a key influence on antidepressant revenue.[74]

Given the necessity of a trusted community, Lundbeck was fortunate that it was able to leverage the Lundbeck Institute, which is highly respected and supported among healthcare professionals. The Lundbeck International Neuroscience Foundation, which is a legal entity, controls Lundbeck Institute's activities. The Neuroscience Foundation is fully dedicated to non-product-related activities, and there must never be any advertising of drugs from any medical company. The high reputation of the Lundbeck Neuroscience Foundation is best demonstrated by the strong support it has from major organisations such as the World Health Organisation, the World Psychiatric Association, the Association of European Psychiatrists, the European College of Neuropsychopharmacology and the Collegium Internationale Neuro Psychopharmacologicum. Figure 5.3 outlines Lundbeck's two possible approaches.

Thanks to the credibility of the chosen internal approach, Lundbeck indeed had two choices, to set up a disease-branded company site or sponsor an independent depression community. Both options ensured an interactive community approach, oriented at the target group. Lundbeck chose the dual approach, since the sponsorship allowed for swift implementation with immediate feedback, while the internal approach maximised the learning by building a community of patients and relatives (see Table 5.1).

During implementation, Lundbeck ensured that the content, functionality and user base of the two approaches were complementary rather than competitive. Therefore, the sites between NetDoktor, DepNet and Lundbeck are interlinked to allow visitors to self-segment themselves. There are also different regulatory demands for the approaches. Since Lundbeck manages the www.depnet.dk site, the site falls under strict DTC regulation. Unlike NetDoktor's site, it can contain only the unabbreviated and approved package insert as product information. Also, Lundbeck needs to capture any adverse events reported online and include them in the regular safety and pharmacovigilance reports.

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[74] Datamonitor, 'Depression awareness campaigns:a key influence on antidepressant revenue?', April 2001, see http://www.datamonitor.com/content/ToC/BFHC0331.htm

Figure 5.3: Lundbeck's two possible approaches

	Company site	Independent site
Disease branded	www.depnet.dk with the support of the well-respected and independent Lundbeck Institute, and an ample network of 'ambassadors'	Sponsorship of NetDoktor's independent community on depression with high value-added services (e.g. online surveys and detailed pooled community intelligence)
Product branded	Not an option for the patient initiative because of DTC regulation	Not an option for the patient initiative because of DTC regulation

Source: almasan Limited

Table 5.1: Comparison of the two possible approaches

Lundbeck's www.depnet.dk	Sponsorship of NetDoktor's community
Control, develop and manage content through network of external providers[75]	Maximise Lundbeck's brand exposure in depression, across targeted countries
Get closer to patients and relatives	Obtain online surveys, including evaluation
Manage community actively, and capture trends to be used for physician education	Source Community Intelligence Report[76] as part of sponsorship

Source: almasan Limited, based on Lundbeck's input

Choosing NetDoktor and garnering internal support

During the decision making, Lundbeck also carefully evaluated alternative options to NetDoktor in Europe for sponsoring depression communities. The key criteria were credibility/trustworthiness and high quality of content (i.e. it had to be based on evidence). Individual country solutions were discarded because of the disadvantages compared with a uniform approach across Europe, which also simplified interactions with the supplier. While patient organisations were credible and trustworthy, they usually lacked high-quality content and the ability to run Websites professionally. After the evaluation, Lundbeck chose NetDoktor to build the independent community sites, and collaborates with patient organisations where possible.

[75] Patient organisation, for example.
[76] Anonymous pooled statistics, with professional support as required.

Since the depression initiative was supposed to complement existing push activities to physicians, country-level marketing and sales organisations were included tightly in the local roll out. Sales representatives can be an important part of the promotional activities because of their strong relationships with doctors, even for consumer/patient initiatives. At Lundbeck, the sales force briefed physicians about the Internet initiative and distributed leaflets for display in waiting rooms. PR events highlighting the reliability of Internet information are used to drive additional visitors to NetDoktor's depression community.

CONCLUSION

Lundbeck has focused on its core franchise, depression, for its Internet activity. Since depression remains highly undiagnosed and untreated, pharmaceutical companies are challenged to improve the patient/physician flow for this disease, as demonstrated by the strong efforts of the WHO and patient organisations. Lundbeck chose a community-based approach targeted at patients as well as relatives. The objective of the implemented initiative is the improvement of patient 'pull' by increasing three dimensions: the recognition of symptoms and visit to medical professionals, the acceptance of required drug treatment, and compliance during the full length of drug therapy. After starting to think internally about a depression initiative, Lundbeck was approached by NetDoktor for European sponsorship of its depression community. After careful evaluation, Lundbeck chose to implement a dual approach, an internal Website by leveraging its widely respected Lundbeck Institute (www.depnet.dk), and external sponsorship by NetDoktor. The dual approach accelerated the launch of the first community on NetDoktor and maximised the association of Lundbeck's brand with depression. At the same time, Lundbeck is able to learn from its internal initiative by managing a patient and relative community. The local marketing and sales departments strongly supported the roll out of the NetDoktor depression communities, especially the sales force, which gained the support of local physicians.

CHAPTER 6: STRATEGIC OUTLOOK – THE GLOBAL HEALTH SERVICE INDUSTRY

The Internet has the potential to impact the pharmaceutical industry much more than simply becoming a tactical marketing and sales tool. It should not be analysed in isolation, but rather in the context of a changing healthcare landscape. Additional forces, as outlined by Ernst & Young in a report on trends shaping the health industry,[77] such as biotechnology, an ageing population, rising consumer activism and the increasing costs of healthcare provision, will shape the healthcare system of the future, and scored much higher in our survey among pharmaceutical executives. However, the importance of the Internet cannot be underestimated when it comes to enabling the creation of new business models that exploit new opportunities in healthcare.

Pharmaceutical executives agree that, in the value chain, the Internet will have the greatest impact on marketing and sales.[78] While there is a wide range of ongoing Internet-based marketing and sales initiatives, such as product Websites and e-detailing pilots, the pharmaceutical industry ranks close to the bottom in embracing e-CRM, thereby indicating its distance from customers. According to PricewaterhouseCoopers, the combined changes from consumer empowerment, information management (Internet), technology (advances to improve diagnosis and disease treatment) and science (genomics) will individualise health management and force the pharmaceutical industry to become more customer-centric.[79] To achieve this objective, the pharmaceutical industry will have to strengthen customer relationships and fundamentally transform existing marketing and sales processes, shifting its attention from products to consumers/patients.

It is time to step back and look at the fundamental transformation of the pharmaceutical industry that has occurred through the action of many shaping forces, including the Internet. As Michael E. Porter has claimed in the *Harvard Business Review*:[80]

> *The time has come to take a clearer view of the Internet. We need to move away from the rhetoric about Internet industries, e-business strategies, and a new economy, and see the Internet for what it is: an enabling technology – a powerful set of tools that can be used wisely or unwisely, in almost any industry as part of almost any strategy.*

But one question remains: which industry to look at. It seems that the demarcation lines between pharmaceutical and medical device products on one side, and healthcare services on the other side, are blurring. One of the most ambitious projects, Medtronic's partnership with IBM, Microsoft, and Healtheon/WebMD, announced in January 2000, should 'provide lifelong solutions for people with chronic diseases'.[81]

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[77] Ernst & Young, *In a Field of Force: trends shaping the health industry*, May 2000.
[78] Cap Gemini Ernst & Young and INSEAD, *Vision & Reality: The Quantum Shuffle – the impact of e on the pharmaceutical and medical device industries*, 2001.
[79] PricewaterhouseCoopers, *Pharma 2005: marketing to the individual*, 1999.
[80] Michael E. Porter (2001) Strategy and the Internet. *Harvard Business Review*, March.
[81] William W. George, Chairman and CEO of Medtronic, 23 February 2000, http://www.medtronic.com/news/articles/20000223153450.html

This could be the first sign of what PricewaterhouseCoopers termed 'health management' in 1999: a new form of individualised, informed, interactive, immediate and integrated healthcare.[82]

CHANGING HEALTHCARE ENVIRONMENT

During 1999 and 2000, PricewaterhouseCoopers, Ernst & Young and the Boston Consulting Group[83] all published reports on the future of the healthcare and/or pharmaceutical industry. One topic featured in all the reports, named variously as 'focusing on the individual', 'consumerism' and 'consumer-centric care', respectively. Biotechnology, and especially advances in genomics, was also mentioned as a key to understanding the future of healthcare.

The role of the Internet within healthcare

In our pharmaceutical executive survey, we asked for an assessment of the five trends outlined by Ernst & Young. Interestingly, the 'new economy' or Internet revolution was believed to be the least important of all trends. The ageing population was cited as the most important trend for the pharmaceutical industry. This is not surprising, since in most industrialised countries those aged 60 and over will increase between 50% and 100%.[84] The rise of consumer activism, increasing cost of healthcare provision and the biotechnology revolution were assessed almost as equally important, as shown in Figure 6.1.

Another trend identified by PricewaterhouseCoopers is related to advances in technology, such as telemedicine and imaging, to improve diagnosis and treatment of disease.[85] These advances will depend on the roll out of Internet broadband infrastructure. New technology, such as computer-assisted surgery, mobile monitoring devices, high-speed, high-resolution 3-D imaging, imaging information processing systems, telepresence surgery and in vivo biosensors, will gradually become available. Francis Bailly, Vice-president of General Electric's Medical Systems Europe, gave a presentation at INSEAD's healthcare conference in 1999 on trends in 'computer assisted diagnosis', in which much post-acquisition image processing is performed for clinical use.[86] He also speculated on its future impact on the healthcare system, predicting a move towards home-based diagnostic screening, forcing hospitals to become high-tech centres of competence for complex diagnosis and treatment.

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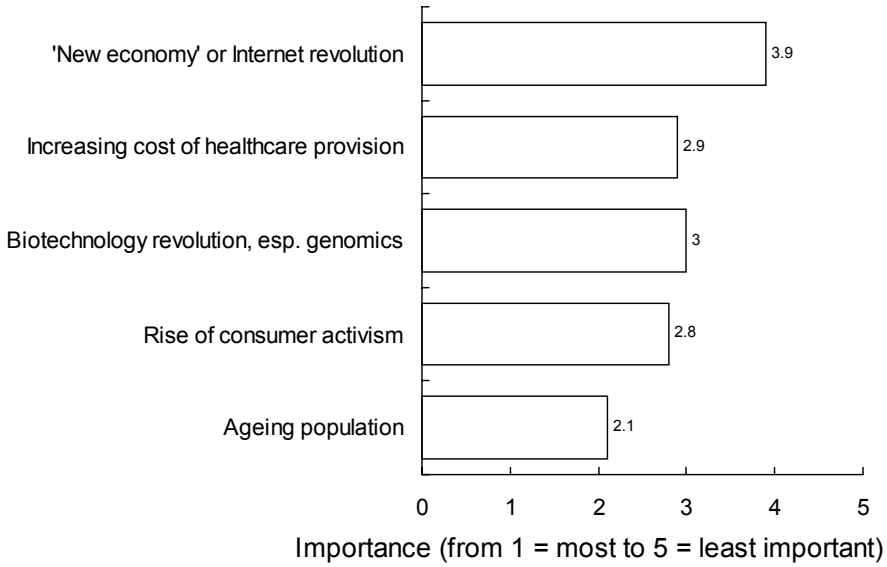
[82] PricewaterhouseCoopers, *Pharma 2005: marketing to the individual*, 1999.
[83] Boston Consulting Group, *The Pharmaceutical Industry into its Second Century: from serendipity to strategy*, January 1999.
[84] US Bureau of the Census, *Global Aging into the 21st Century*, 1998.
[85] PricewaterhouseCoopers, *Pharma 2005: marketing to the individual*, 1999.
[86] Francis Bailly, Vice-president of GE Medical Systems Europe, 'Technological innovation and the hospital of the future', INSEAD, 9 April 1999.

Figure 6.1: The relative impact of trends on the future of healthcare



Source: Informa–almasan pharmaceutical survey, 2001

The Internet is used increasingly as an enabling technology for activities targeted at the identified trends. As the examples in Table 6.1 illustrate, it can be essential for new, innovative approaches.

Table 6.1: The Internet as enabling technology

Healthcare trend[87]	Example of Internet as enabling technology
Ageing population	Deliver home healthcare to the elderly
Rise of consumer activism	Network patient groups and increase consumer power
Biotechnology, especially genomics	Access distributed computing power for protein-folding calculations
Increasing cost of healthcare provision	Reduce administrative costs through healthcare connectivity
Technology (for diagnosis and treatment)	Share radiology examination results with experts for second opinion

Source: almasan Limited

Care for individual consumers

The individual consumer/patient is becoming the focal point of the healthcare industry. The demands made on the healthcare system are changing, since a growing part of the population is more sensitive to healthcare than ever before. Increasingly, the baby-boomer generation is demanding not only medicines to cure illness but is

[87] A combination of trends identified by PricewaterhouseCoopers and Ernst & Young.

also seeking means to prevent illness and enhance wellness. Organisations enabled by advances in information technology and biotechnology will be able to explore new market opportunities by providing care to individual consumers/patients.

In the UK, the NHS wants to have electronic patient records implemented fully by December 2005.[88] Once electronic medical records are in use, healthcare professionals will be able to advance medical standards by measuring medical outcomes. The constant evaluation of treatments based on their outcomes will boost individualised evidence-based medicine (EBM), and force the medical profession to adopt best practices faster.

In parallel, research in genomics, and especially pharmacogenomics, points to a seismic shift in drug therapy, from a 'one-size-fits-all' approach to a new era of personalised medicine, in which doctors will increasingly be able to prescribe the right drug at the right dose for the right person.[89] Often used interchangeably with pharmacogenetics, pharmacogenomics is the study of how inherited genetic differences in humans influence individual responses to drugs. According to Gerald F. Vovis, Senior Vice-president and Chief Technology Officer of Genaissance Pharmaceuticals, pharmacogenomics will shortly transform the way drugs are developed, marketed and prescribed. The benefits will appear within a 5-year timeframe, as indicated by the already ongoing (pharmaco)genomics efforts:

> *Genaissance Pharmaceuticals is a leader in establishing the new field of personalised medicine through the application of population genomics, informatics, and clinical data.*[90] *It has launched the largest personalised medicine clinical study, to link statin drug response to genomic markers. The STRENGTH study (Statin Response Examined by Genetic HAP™ Markers) will enroll approximately 600 patients treated by the four products Lipitor, Zocor, Pravachol, and Baycol, with combined sales of USD 13 billion in the US. At the end of the study, which will take approximately one year, Genaissance believes it will have the HAP™ Markers (akin to genomic bar codes) that predict an individual's improvement in cholesterol, as well as potential side effects, in response to a particular statin.*
>
> *On December 17th 1998, the Icelandic population passed a law authorising the creation and sale of a single database that will hold the medical records, family history and genetic blueprint of every Icelandic citizen.*[91] *The new database will be established and mined by deCODE Genetics,*[92] *a research company based in Reykjavik, the capital of Iceland. DeCODE will have exclusive marketing rights over the database for 12 years. The Swiss pharmaceutical company Hoffmann-La Roche has signed a contract valued at USD 200 million in 1998 with deCODE to develop drugs based on the results of deCODE's research.*[93]

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[88] http://www.parliament.the-stationery-office.co.uk/pa/cm199900/cmselect/cmpubacc/406/9110108.htm
[89] *The Scientist* **15**(12), p. 10, 2001.
[90] http://www.genaissance.com/home_index.html
[91] http://www.facts.com/tsof/tsof177.htm
[92] http://www.decode.com/; see also Kari Stefansson, President and CEO of deCODE Genetics Inc., 'Genetic profiling: a view of the future', presented at 'Healthcare 2020: The Promise of Innovation', INSEAD, 9 April 1999.
[93] See www.recap.com

Once diagnosis and treatment decisions can be based on widely available medical records and advances in genomics, medical outcomes can be evaluated much better than today, leading to individualised medicine. However, medical professionals will have to rely increasingly on medical decision support systems, as deCODE expects to offer, to cope with the complexity. Through the use of increasing automation and standardisation, some of the roles presently performed by physicians might be undertaken by nurse practitioners, physician assistants and medical technicians, as indicated by *The Economist* in 2000:[94]

> *But the new diagnostics and treatments may also cause a shift in the relationship between patient and doctor. With diagnosis turned from a black art into an exact science, and drugs tailored reliably to an individual's genome and biochemical symptoms, much of the skill that doctors now deploy will have become automated.*

TRANSFORMING MARKETING AND SALES

Given the fundamental change towards individualised care, getting closer to the customer and building a strong customer relationship is becoming key. An article entitled 'Unbundling the corporation' by John Hagel and Marc Singer was first-place winner of the 1999 McKinsey Awards, granted by a panel of judges, which included Daniel L. Vasella, Chairman and CEO of Novartis.[95] According to the authors, beneath the surface of most traditional companies are three kinds of different businesses, related to customer relationships, innovation and infrastructure, which will be unbundled because of the Internet:

- The customer relationship business is concerned with finding customers and building relationships with them. It reflects the current activities of marketing and sales. However, these processes are centred around products and have to be re-focused on the customer.

- The product innovation business conceives attractive new products and services, and it determines how best to bring them to market. It has been the growth engine of the industry, driven by advances from the R&D function. Innovation now comes increasingly from outside.

- The infrastructure business provides facilities for logistics, and is cost focused and driven by scale. The corresponding manufacturing and development functions are already provided by contract manufacturing organisations and contract research organisations, respectively.

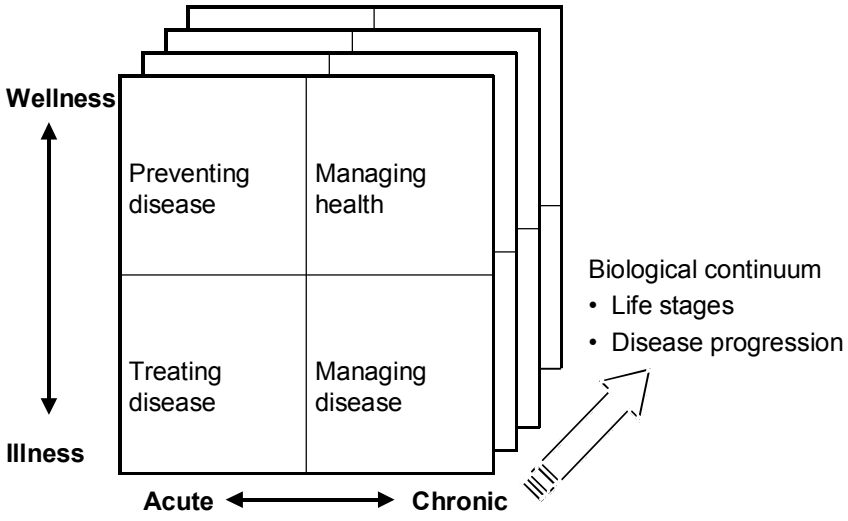
In 1998, Jürgen Drews, former Head of Roche Research and current Chairman of the Board of Genaissance Pharmaceuticals, had already observed the unbundling of the

[94] A survey of the human genome. *The Economist*, 1 July 2000.
[95] John Hagel III and Marc Singer (March–April 1999) Unbundling the corporation. *Harvard Business Review*.

industry in terms of the R&D function.[96] Given the increasing innovation from biotechnology and research institutes, he claimed that large pharmaceutical organisations are becoming merely (late) development and marketing and sales organisations. Barrie G. James had already outlined in 1997 in his *PharmVision 2005* how the future pharmaceutical business could look.[97] The new pharmaceutical model is customer focused, has low, flexible costs and outsources non-core functions. Instead of the product as the only source of innovation, customer understanding drives the business. Innovation across functions becomes a core competence, compared with technology and scale today. Interestingly, the authors of the *Pharma 2005* report by PricewaterhouseCoopers also conclude that leveraging the biological continuum of each *individuum* to treat disease, manage disease, prevent disease and manage health will require a customer-centric focus (see Figure 6.2).[98] They also conclude that collection of individualised market intelligence, and strong collaboration across many different, yet emerging, businesses, will become a key success factor.

Ultimately, the anticipated changes will transform the pharmaceutical industry, impacting the value chain and altering the sources of competitive advantage. The need to fundamentally restructure current operations in order to succeed in the future could give smaller, more nimble players an advantage. Traditional assets, such as size and resources, could prove less relevant in a transition phase. Small and medium-sized biopharmaceutical companies have the opportunity to alter industry entry barriers by fully aligning their business with a new paradigm, as outlined in Table 6.2.

Figure 6.2: Pharma framework and the biological continuum



Source: *Pharma 2005: marketing to the individual*, PricewaterhouseCoopers, 1999

[96] Professor Jürgen Drews, *Die verspielte Zukunft: Wohin geht die Arzneimittelforschung*, Birkhäuser Verlag, 1998.
[97] Barrie G. James, *PharmVision 2005: post-millennium strategies for the pharmaceutical industry*, Decision Resources, October 1997.
[98] PricewaterhouseCoopers, *Pharma 2005: marketing to the individual*, 1999.

Table 6.2: Paradigm shift in pharmaceutical strategy	
From the old …	**… to the new**
Sales force relationships	Multi-channel relationships
Size and resources	Focus and leverage of partnerships
Random blockbuster	TA/indication and/or patient franchises
Physician focused	Integrated physician/patient
Product	Product/service bundle
Simple, generic message	Complex, patient-specific message
Source: almasan Limited	

Towards customer-centric processes

In her seminal work 'Customers.com – the customer revolution', Patricia Seybold has outlined eight key principles to build a successful customer-centric business, which can also be applied to the pharmaceutical industry (see Table 6.3).

Table 6.3: Key success factors for a customer-centric business	
Key success factors	**Example for pharmaceutical industry**
Target the right customers	Select target segment and initiative objective based on bottleneck in patient/physician flow
Own the customers' total experience	Manage the GP product exposure from opinion-leader support to serious adverse-event reporting
Streamline business processes that impact the customer	Adapt all processes to enable full self-service for all interactions with physicians
Provide a 360 degree view of customer relationships	Understand the customer relationships across all functions, BUs/therapeutic areas/products
Let customers help themselves	Provide physicians with opportunity to access articles, samples, e-CME, e-detailing
Help customers to do their job	Facilitate interactions between physicians and patients (e.g. compliance programmes)
Deliver personalised service	Support patients through a fully personalised behaviour change programme (e.g. stop smoking)
Foster community	Sponsor relative communities to cope with difficulties of care giving
Source: Seybold, 'Customers.com – the customer revolution', almasan Limited	

Adopting a customer-centric business approach has proved to be a difficult challenge in many industries. Unfortunately, the pharmaceutical industry does not yet have a successful case example for a period as long as 24 months, which is the time required to achieve significant success. As Seybold and Marshak have pointed out in their book *Customers.com: how to create a profitable business strategy for the Internet and beyond* (Random House, 1998):

> *Sound easy? Well, it's not! The idea of focusing on making it easy for customers to do business with you is simple. But implementing this vision is difficult. As you'll see from skimming the sixteen case studies that follow, each of these organizations has been hard at work for more than twenty-four months.*

Pharmaceutical companies face an increasingly complex array of prescribing 'influencers'. Where once only physicians were relevant, a successful customer-centric process now has to take care of physicians, payers, pharmacists and patients. To cater to the needs of these customers, pharmaceutical companies will have to alter their marketing and sales approach fundamentally. New initiatives beyond products – for example supporting all aspects of a disease, such as Roche's recently announced Integrated Cancer Care Unit benefiting from a strong diagnostics and pharmaceutical business – will become key. The tactical marketing and sales mix will subsequently have to change, probably substantially increasing the investment on the Internet, a key tool to building lasting relationships. Increasingly, the Internet will also play a fundamental role in transforming the marketing and sales processes, enabling collaborations both within and outside companies. All participants in the new innovation chain will have to work together, creating and sharing their market intelligence.

New Internet marketing approaches

The traditional marketing and sales mix has gradually started to change, to incorporate new marketing approaches focused on the customer. The Internet is ideal as a platform for adopting the new pharmaceutical paradigm (outlined in Table 6.2), since it provides pharmaceutical marketers with the ability to provide services to both consumers/patients and physicians economically.

Pharmaceutical marketers have already started to leverage the Internet tactically into their marketing mix. Over time, the Internet will be integrated through an orchestrated marketing programme differing by product life cycle such as launch or Rx-to-OTC switch. How much the Internet will impact each spending category, and especially the sales force, is still highly debated within the industry. A third of the Cap Gemini Ernst & Young/INSEAD survey participants believe that e-detailing could cut sales costs by as much as 50% and improve physician access, as outlined by a CIO:[99]

> *E-detailing will become the mainstream way of doing business. I believe in 5 years from now, 70% of all detailing will be done electronically.*

The Internet will have most impact on activities relating to information dissemination, currently comprising more than 80% of the spending. Physician activities include advertising, direct mail, physician education and detailing to physicians, all of which can be done online. Consumer/patient initiatives and health economics will become much more important, owing to the increasing demand for individualised evidence-based medicine. Health economics, in particular, will need to take advantage of the electronic medical records. The Internet will even have an

[99] Cap Gemini Ernst & Young and INSEAD, *Vision and Reality: The Quantum Shuffle – the impact of e on the pharmaceutical and medical device industries*, 2001.

impact on activities involving tangible goods, such as samples and memorabilia, since customers will increasingly acquire the desired goods through self-service. While the Internet might not save the costs incurred in sponsoring conferences and meetings, it can enable pharmaceutical marketers to leverage it for a much wider audience, not just the physicians attending the event. Together with platforms for virtual conferences, as provided by some physician portals, pharmaceutical marketers can reach out to almost all physicians with contributions from opinion leaders, and initiate the desired discussions to penetrate the market.

Table 6.4 illustrates the role of the Internet as part of the traditional marketing and sales mix.

Table 6.4: The Internet as part of the traditional marketing and sales mix

Marketing and sales category	Internet options
Detailing	Online detailing (e.g. interactive (video), information only)
Physician education	Online continuous medical education (pull and push)
Samples	Online pull and targeted push (e.g. online experience trials)
Meetings, conferences	Broadcasting on demand, virtual discussion forums
Direct mail	e-Mail
Advertising	e-Mail, topic sponsorship, banner ads, etc.
Memorabilia	Online pull and targeted push (e.g. online service)
Health economics	Online studies (e.g. quality of life as part of electronic records)
Public relations	Online press centre (e.g. discussion forums by segment)
Consumer (in Europe)	Topic sponsorship, community site, disease site, etc.

Source: almasan Limited

Within a 5-year timeframe, scientific advances in pharmacogenomics and other fields will start coming to fruition, making extrapolations of the past irrelevant. In such a world, the Internet could become a key channel for an integrated customer relationship, both with consumers/patients and physicians. When experimenting with new approaches, pharmaceutical marketers should focus on the power of the Internet to accelerate the slow adoption of new knowledge in healthcare. Pharmaceutical marketers will need to develop new marketing approaches that go beyond translating current push models online. The Internet can be a powerful tool for facilitating interactions between, for example:

- Advocacy groups, such as patient organisations and pharmaceutical companies. Rodney Elgie, Executive Director of the Depression Alliance, urges patient organisations to form partnerships with the industry:[100]

  There can be little doubt that partnerships between voluntary health organizations (VHOs) and corporate bodies will be the key to the future in ensuring that patients become equal partners with healthcare purchasers. If personal ambition, petty squabbles, individual agendas, prejudice, unfounded fear and territorial considerations can be put aside by both VHOs and corporations, and effective working partnerships developed, the benefits for both can be enormous. Not only will VHOs derive funds which would not otherwise be available, but also the information shared could lead to more appropriate treatment for patients and, indeed, a more patient-centred healthcare system.

- Physicians and/or patients. In her article on word-of-mouth promotion, or viral marketing, Renée Dye has also turned her attention to the pharmaceutical industry.[101] With many new drug therapies, for instance, early patients who have been treated successfully wish others to benefit as well.

THE FORMATION OF A GLOBAL HEALTH SERVICE INDUSTRY

The new trends leading to individualised care might spur significant changes to the structure of the healthcare industry. As discussed, genomics will provide the ability to understand each individual better, and enhance decision making during prevention, diagnosis and treatment. Information technology, especially the Internet, will increase transparency of medical outcomes, and lead ultimately to standardised treatment protocols based on evidence-based medicine. The two synergistic forces have the power to transform healthcare and give rise to a global health service industry (see Figure 6.3). It is difficult to predict who the dominant players in the new industry will be. They might come from new e-health start-ups, such as Healtheon/WebMD, hospitals leveraging their competences for e-health, such as Mayo Clinics,[102] pharmacogenomics companies such as Genaissance Pharmaceuticals, or pharmaceutical companies stretching their core competences into the new global health service field, such as Roche's Integrated Cancer Care Unit. In future, totally new players might also emerge, focusing on a very narrow segment of the health service industry only, as outlined by Nathan Myrvold, former CTO of Microsoft, who founded Intellectual Capital, a venture capital fund dedicated to biotechnology investments:[103]

So, you've got to take this whole drug discovery and, ultimately, the whole health care system into separate pieces, and find those areas that you can specialize in.

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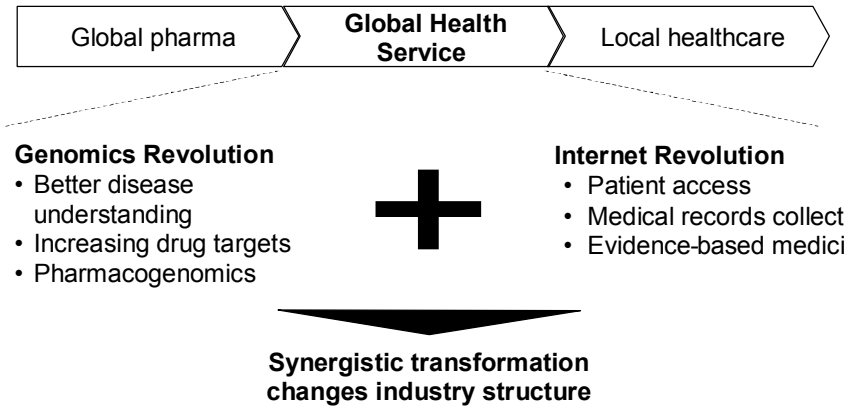
[100] Rodney Elgie, *Journal of Primary Care Mental Health*, 1999 (look-up Internet link).
[101] Renée Dye (2000) The buzz on buzz. *Harvard Business Review*, November–December.
[102] www.mayohealth.org
[103] http://www.redherring.com/index.asp?layout=story&channel=40000004&doc_id=1370017737

Figure 6.3: Formation of a global health service industry



Source: almasan Limited

If it is the belief that a global health service cannot become reality, thought should be cast back to the second half of the 19th century, when today's modern pharmaceutical industry was born. The advent of pharmacology to test new drugs scientifically, together with substantial advances in organic chemistry to produce active ingredients consistently, globalised the traditionally local business of the pharmacist. Looking back now, the opportunities were tremendous, as witnessed by Merck's pharmacy in Darmstadt, which in 1827 became the seed for one of today's largest and most successful pharmaceutical companies, Merck & Co.[104] Also, chemical companies such as Bayer used their organic chemistry know-how in coal-tar-based organic dyes to build substantial value with their pharmaceutical businesses.

The history of the pharmaceutical industry also tells us that it will be a long time before the shape of the new global health service industry becomes apparent. It took the pharmaceutical industry a century to mature into a truly global industry, in part because of ongoing consolidation through mergers and acquisitions. Regulation concerning the role of the local pharmacist, which was affected significantly by the industrialisation of drug production, is even now yet to be completed in most of Europe. In Germany, for example, strong lobbies endeavour to retain the stringent regulations prohibiting the formation of pharmacy chains and, more recently, any attempts to supply pharmaceutical products via the Internet.

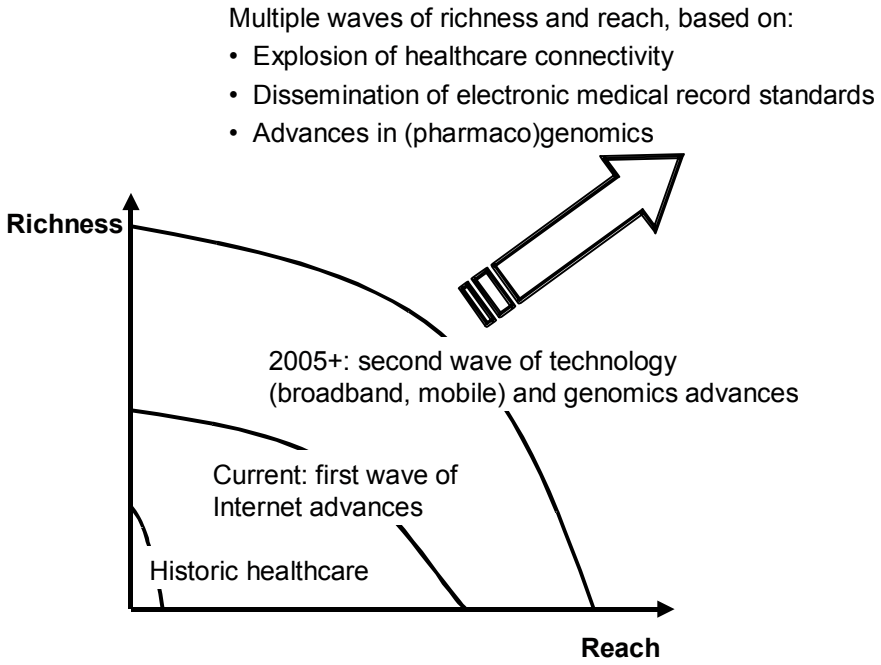
It is not at all clear how the new global health service industry will evolve. For those searching for inspiration, William Gibson, who also coined the term 'cyberspace', might provide interesting clues as to what an amalgamation of biotechnology, high-tech and medical devices industries could look like.[105]

[104] http://www.merck.de/english/corporate/index.htm, see 'The name Merck'.
[105] William Gibson, 'Neuromancer', 1984, see www.wsu.edu:8080/~brians/science_fiction/neuromancer.html

Relevant factors for a global health service industry

The Internet is fundamentally changing interaction costs and, for the first time, realising the opportunity to provide fully scalable health services to the masses. As outlined by Philip Evans and Thomas S. Wurster in their *Blown to Bits: how the new economics of information transforms strategy*, new levels of richness and reach are attainable through advances in technology.[106] Historically, it has been almost impossible for any organisation to scale its health services to consumers/patients economically, as evidenced by the problems disease management initiatives faced in the late 1980s. Indirectly, through healthcare professionals, there was a certain level of richness attainable but only through costly face-to-face or telephone interactions. Currently, the Internet enables a fundamental increase in reach to consumers/patients. Richness has also increased since consumers/patients can actively interact in simple compliance or disease management programmes. The next step change beyond 2005 will come from a second wave of advances in technology, such as broadband connectivity and faster mobile telephony, thereby increasing the reach further. In parallel, standardisation of electronic medical records and advances in (pharmaco)genomics will initiate a step change in the richness of services, as shown in Figure 6.4.

Figure 6.4: Richness versus reach in a global health service industry



Source: almasan Limited

[106] Philip Evans and Thomas S. Wurster, *Blown to Bits: how the new economics of information transforms strategy*, Harvard Business School Press, 2000.

Unfortunately, advances in science and technology will not lead to substantial improvements in consumer/patient welfare if regulation hinders necessary changes in the healthcare system. Less-skilled health professionals, and ultimately the patient through self-care, will increasingly be able to perform tasks they were not able to do before, as outlined by Clayton Christensen *et al*.[107] As the healthcare system has overshot the needs of even the most demanding customers, by increasing the performance necessary to resolve the most difficult cases costs have been rising continuously, especially in the US. To counter the cost pressure, healthcare needs to take advantage of disruptions by increasing the performance of less-skilled healthcare professions or less sophisticated institutions. The authors urge healthcare regulators to overcome inertia, and match the skill level to the difficulty of the medical problem. As we know from the European pharmacist, this might take a long time indeed.

Unlike in the US, the healthcare system in Europe is mostly state controlled, which could lead to the fast adoption of country standards. As standard setting has proved to be the key to much quicker mobile telephony penetration in Europe compared with the US, its impact cannot be underestimated. At an IBC conference on e-health in Europe,[108] Steve Mott summarised the UK's National Health Service (NHS) plan to use the Internet. The NHS has already started to roll out information services, such as NHS Direct for consumers and NHS Net for professionals. By 2005, it is committed to the full implementation of electronic medical records, including transfer functionality. In addition, pilots for e-prescribing are already ongoing. All efforts combined will become a platform to generate valuable health know-how. It might also become a source for new start-ups entering the global health service industry by using the vast databases, similar to deCODE in Iceland. The pharmaceutical industry is well aware of the value of the NHS information. As part of the Pharmaceutical Industry Competitiveness Task Force, the UK government and the pharmaceutical industry have agreed in principle that there is 'potential for greater use by industry for NHS information',[109] as outlined in the Final Report published in March 2001:

> *Given the necessary safeguards on security and confidentiality of patient data, there is potential for the NHS and industry to work together to develop data sources that will significantly improve the quality of information available for research into medicines. This potential applies across the whole range of pharmaceutical issues – health economics and outcomes research, clinical trials evaluation, epidemiology, safety, education and concordance. Developing this potential is to the mutual benefit of the NHS as it facilitates the better clinical and cost-effective use of medicines and to the industry in its search for improved use of medicines and the development of new medicines. That in turn benefits both public health and industry competitiveness. Availability of high quality clinical information databases in itself encourages R&D investment. Under the auspices of PICTF, a workshop was held in January 2001 to discuss how better access to NHS data for pharmaceutical research and development purposes could be secured. Major issues remain to be explored further, but both industry and Government are*

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[107] Clayton M. Christensen, Richard Bohmer and John Kenagy (2000) Will disruptive innovations cure health care? *Harvard Business Review*, September–October.

[108] Steve Mott, Director of Datapharm Communications, UK, 'Informatics – how UK doctors use the Internet and its strategic implications', presented at IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.

[109] Final Report, Pharmaceutical Industry Competitiveness Task Force, March 2001, p. 8, http://www.doh.gov.uk/pictf/pictf.pdf

committed to working together to find solutions that meet the legitimate needs of the NHS and its patients and improve the competitiveness of the UK in attracting investment from the global research-based industry.

Market entry routes for pharmaceutical players

Pharmaceutical companies currently face the challenge of coping with reducing patent protection for their top products. According to a study by EvaluatePharma, the median time to patent expiration for the top 100 pharmaceutical products, by sales, will have decreased from 7 years in 1993 to only 3 years in 2003.[110] The industry will come under the combined attack of generic competitors and first 'niche' products nibbling away on 'one-size-fits-all' blockbusters. This tough environment might entice some pharmaceutical companies to enter the new global health services industry in order to survive in the long term.

According to the pharmaceutical managers at the 'eHealth-europe' IBC conference, the e-health industry has yet to find the strategic 'sweet spot'. However, 50% believed that e-health will become a commercially viable business model in Europe within the coming 1–3 years. Less than 20% of the pharmaceutical managers claimed that it could take longer than 5 years, or not happen at all. When asked to pick the winning approach in e-health among the four 'c's (content, commerce, connectivity and care[111]), almost 40% suggested that it might not be one of these simple categories. Content and commerce scored especially low, with a combined 15% of supporters (see Table 6.5).

Table 6.5: Pharmaceutical managers' assessment of e-health in Europe

When will e-health become a commercially viable business model in Europe?		Which business model will win?	
Time period	**%**	**Model**	**%**
Never	9	Content	6
More than 5 years	10	Commerce	9
3–5 years	28	Connectivity	19
1–3 years	50	Care	19
<12 months	3	None of these simple models	38
		Other/do not know	9

Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

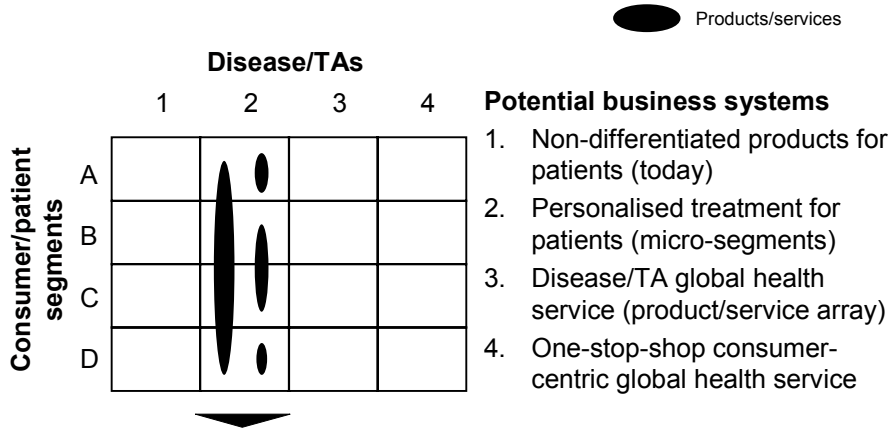
As can be seen, pharmaceutical companies are increasingly looking at the emerging global health service industry. If they choose to enter the industry, they need to decide how best to go about it. It might not require a large up-ront investment, since pharmaceutical companies can wrap value-added services around their existing

[110] *EvaluatePharma Newsletter*, Issue 5, September 2000.
[111] Stan Bernard, 'eHealth overview: evolution of the eHealth space', *Pharmaceutical Executive Supplement*, March 2000.

products, starting with compliance programmes, for example. Since higher compliance automatically results in increased product sales, this strategy should quickly become self-funding. It also liberates the pharmaceutical industry from having to introduce a new revenue mechanism, such as direct consumer/patient contributions. While e-health companies already provide value-added services, they are less successful in finding acceptable ways of charging for their services.

The next step, providing services for a disease, will be more difficult, since it requires an unbundling of the services from proprietary pharmaceutical products to focus credibly on the customer. If it wants to thrive long term, Roche's Integrated Cancer Care Unit will have to prove that it does not favour Roche's oncology products beyond what is its fair share. Medco, a pharmacy benefit management (PBM) company acquired by Merck, successfully mastered a similar challenge and is now the largest PBM in the US covering 65 million Americans.[112] Similarly, Roche might be able to globalise what is currently local healthcare, and create a new global health service leveraging its diagnostics business (see Figure 6.5).

Figure 6.5: Evolution of global health services from pharmaceutical products



Source: almasan Limited

Finally, pharmaceutical companies may want to capture consumer relationships and exploit the biological continuum, as outlined by PricewaterhouseCoopers. This will be possible only through radical reorganisation around the consumer/patient. In addition, it will also require a fundamental shift in industry structure, where highly specialised companies collaborate extensively through partnerships. Sharing individualised market intelligence will become a core process in bringing new services to the market successfully.

As the pharmaceutical industry has huge financial resources, it might also buy itself into the market once start-up companies have proved the commercial viability of e-health. Similarly, pharmaceutical companies bought themselves into biotechnology,

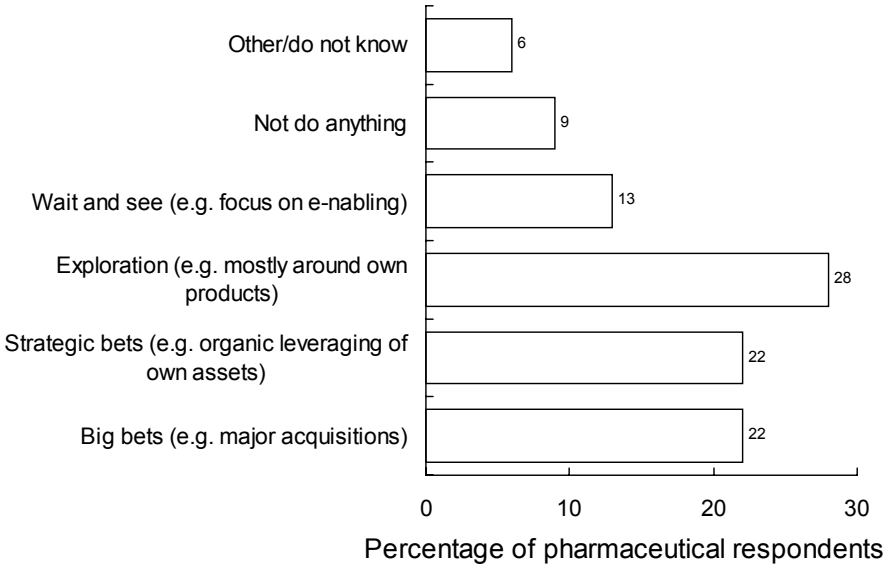
[112] http://www.merck-medco.com/medco/index.jsp?ak=on, see 'About us'.

once it became clear that the new scientific approaches yielded positive results. First evidence for the trend is provided by Aventis' acquisition of a small company called MyDocOnline during October 2000. According to Richard J. Markham, CEO and Chairman of the Board of Aventis Pharma, this is a strategic move to enhance the communication between patients and their own physicians:[113]

> *When we formed Aventis in December of last year, we set a goal to be a leader in responding to the opportunities and challenges associated with the Digital Revolution. Today's announcement is the first tangible evidence of our commitment in this arena. More importantly, MyDocOnline represents an opportunity to enhance the communication between patients and their own physicians, which we expect to lead to better patient outcomes.*

When asked to predict what biopharmaceutical and medical device companies will undertake in the coming 2 years, more than 20% of the pharmaceutical managers claim that their companies will undertake major acquisitions. Half believe that their companies will grow organically, either through strategic bets leveraging their own assets or through exploration around own products. Less than 25% believe that their companies will adopt a wait-and-see attitude, and focus on e-nabling their processes, or not do anything at all, as shown in Figure 6.6.

Figure 6.6: What will the biopharmaceutical and medical device companies undertake in e-health in the next 2 years?



Source: IBC conference 'eHeath-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona

We might see another wave of major acquisitions, similar to the PBM acquisition in the early 1990s when Merck acquired Medco in 1993 for $6.6bn. It would not be surprising if such acquisitions take place once the industry collectively acknowledges the large potential for global health services enabled by the second wave of

[113] http://www.mydoconline.com/aventisrelease.htm

technological advances, such as broadband and next-generation mobile telephony. If genomic advances are also factored in, we might witness even larger transactions in future than the Merck–Medco acquisition, potentially including traditional healthcare businesses. It will be interesting to follow the progress of Marty Wygod, the serial healthcare entrepreneur responsible for the Merck–Medco transaction,[114] at the helm of Healtheon/WebMD, since he has a history of initiating acquisitions.

CONCLUSION

The Internet cannot be isolated from other advances in healthcare. It is playing an important enabling role within the changing healthcare environment, which is increasingly shaped by an ageing population, a rise in consumer activism, rising costs, and genomics. Care for the individual is becoming the focal point of the industry owing to the implementation of electronic patient records that contain data on the individual, and advances in (pharmaco)genomics, whereby drugs are tailored to the genetic predisposition of the individual. Pharmaceutical companies will be forced to focus on customer relationships and offer a product/service bundle, since they have to target the physician with patient-specific messages, for example through e-detailing. Consumer/patient-centric processes, such as direct marketing and compliance/disease management programmes, will become important, resulting in a change of the traditional marketing and sales mix. The synergistic changes of the genomics and Internet revolution will initiate the formation of a global health service industry. The formation of the new industry will be further accelerated by the next wave of technology, such as broadband and next-generation mobile telephony, improving the ability to provide highly customised, rich health services to anyone, any time, anywhere. The potentially positive impact on the healthcare system will materialise only if regulation allows for the changing roles of healthcare professionals (and patients). Through the strong lead of governments in healthcare, especially in the UK, where the NHS is committed to full implementation of electronic patient records by 2005, Europe might create a distinct advantage by adopting (at least country-specific) standards. Pharmaceutical players can enter the global health service industry cost-effectively by building services around their own products, which generate incremental (product) sales. The next step will be an integrated disease service, such as Roche's Integrated Cancer Care Unit. It will prove much more difficult to complete the transformation, and provide one-stop-shop consumer/patient-centric global health services. Therefore, we might see a wave of acquisitions when technology advances again, and global health services are recognised as the next large multi-trillion-euro battleground.

[114] http://www.worth.com/content_print/ZZZM99MXAHC.html

CHAPTER 7: RESOURCES – REGULATORY ENVIRONMENT

The very stringent regulatory situation across Europe is cited often as a key hurdle for e-marketing and sales initiatives in the pharmaceutical industry. In a recent Cap Gemini Ernst & Young survey,[115] pharmaceutical and medical device managers claimed that legal and regulatory issues are the second biggest external barriers to realising benefits from the Internet. The authors put this assessment into perspective:

> *However, for markets outside of the US and New Zealand,*[116] *the extent to which pharmaceutical companies undertake consumer-facing information initiatives is largely dictated by the internal perceptions of the regulations governing DTC. In practical terms, geographic regulatory constraints are no longer an insurmountable barrier to establishing a relationship with the end consumer – the red tape is mostly imaginary.*

This assessment seems to be confirmed by our IBC–Informa survey. 'Hostile regulatory environment' ranks only as the fifth hurdle, rating significantly after budgetary constraints, lack of support from headquarters, and lack of support from local management. Leveraging third-party sites, under certain considerations, does not fall under the stringent advertising rules for pharmaceutical companies. Therefore, pharmaceutical marketers can increase their degree of freedom through partnerships to implement truly valuable Internet offers. At the same time, they can also accommodate both physicians' and patients' need for independent information – as outlined above – resulting in a true win-win-win situation for all parties involved.

REGULATORY BODIES IN EUROPE

According to Paul Woods, Chairman of the IFPMA Internet Taskforce, the Internet raises general uncertainty about what is allowed.[117] Based on his presentation at the eHealth-europe IBC conference in May 2001, the key issues are:

- *Which country rules should be applied?*

  Pharmaceutical marketers need to resolve, country by country, whether they are subject to local regulation based on the location of the server, of the originator, of the originator's headquarters, and/or of the intended audience (potentially extrapolated from the language and country-specific information). In addition, they have to understand whether exclusion measures, such as disclaimers, passwords to protect entry and user country identification, are sufficient to affect jurisdiction.

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[115] Cap Gemini Ernst & Young and INSEAD, *Vision & Reality: The Quantum Shuffle – the impact of e on the pharmaceutical and medical device industries*, 2001.
[116] Markets with relaxed DTC regulations.
[117] Paul Woods, International Promotional Affairs, AstraZeneca, IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.

- *What is promotion or education?*

  Pharmaceutical marketers walk a fine line between promotion and education on the Internet. Information on the Internet relating to medicines can be both a library of information, which information seekers explore (pull), and advertising by pharmaceutical companies (push). It all depends on country, precedent, specific case example and push back through complaints.

The relevant regulatory bodies in Europe exist both at the European level and at country level. Access to Internet sites with 'promotional content' for healthcare professionals, for example, is regulated at country level, and usually needs to be protected. In most European countries, the regulatory and self-regulatory bodies have not issued specific guidance on the Internet but, according to Paul Woods, only Ireland, Sweden and Norway do not require protected access to promotional information for prescription medicines. Many, mostly country- or language-specific, providers of password protection systems are supporting the pharmaceutical industry with their services (see Chapter 8). While all European countries have their specific regulators, only the UK, France and Germany are covered in here in any detail, in addition to the most relevant European bodies:

- European Medicines Evaluation Agency (EMEA): http://www.emea.eu.int/
- European Commission, Directorate-General Enterprise Pharmaceutical and Cosmetics
- General Directives from the EU affecting Internet business.

European Community regulation

The most recent European Council Directive on advertising of medicinal products for human use dates back to 1992, namely Council Directive 92/28/EEC,[118] and became effective as of 1 January 1993. Obviously, the Internet was not highlighted specifically in the Directive, but the principles outlined still apply to it. Excerpts of the guidelines are presented below, specifically those affecting scientifically accurate and reliable presentation (Article 2), direct-to-consumer advertising (Article 3), prescriber advertising (Article 6) and prescriber incentives (Article 9):

Parts of Article 2:

3. The advertising of a medicinal product:

   - shall encourage the rational use of the medicinal product, by presenting it objectively and without exaggerating its properties
   - shall not be misleading.

Parts of Article 3:

1. Member States shall prohibit the advertising to the general public of medicinal products which

[118] http://dg3.eudra.org/eudralex/vol-1/pdfs-en/920028en.pdf

- are available on medical prescription only, in accordance with Directive 92/26/EEC

4. The prohibition referred to in paragraph 1 shall not apply to vaccination campaigns carried out by the industry and approved by the competent authorities of the Member States.

Parts of Article 6:

1. Any advertising of a medicinal product to persons qualified to prescribe or supply such

   - essential information compatible with the summary of product characteristics;

   - the supply classification of the medicinal product.

   Member States may also require such advertising to include the selling price or indicative price of the various presentations and the conditions for reimbursement by social security bodies.

2. Member States may decide that the advertising of a medicinal product to persons qualified to prescribe or supply such products may, notwithstanding paragraph 1, include only the name of the medicinal product, if it is intended solely as a reminder.

Parts of Article 9:

1. Where medicinal products are being promoted to persons qualified to prescribe or supply them, no gifts, pecuniary advantages or benefits in kind may be supplied, offered or promised to such persons unless they are inexpensive and relevant to the practice of medicine or pharmacy.

During a session on 15–16 April 1999, the Pharmaceutical Committee published interpretative guidance to Directive 92/28 concerning borderline information and advertising related to the Internet (PHARM 250a):[119]

> The unmodified and unabridged publication on the Internet of information on medicinal products (prescription only and OTC products), which has been authorised by competent authorities, e.g.:
>
> - the Summary of Product Characteristics of a medicinal product
>
> - the package leaflet of a medicinal product
>
> - public assessment reports of a medicinal product
>
> should normally not be considered as advertising, unless the presentation of this information clearly constitutes a 'hidden inducement' to promote the prescription, supply, sale or consumption of the medicinal product. The

[119] http://dg3.eudra.org/pharmacos/docs/doc99/Pc47inf.pdf

existence/non-existence of a 'hidden inducement' must be checked on a case-by-case basis, taking into account the overall presentation of the information.

The above principle applies equally to the publication of compendia of Summary of Product Characteristics, package leaflets or public assessment reports in printed form.

According to Article 1 paragraph 4 of Directive 92/28 'correspondence needed to answer a specific question about a particular medicinal product' must not be considered as advertising. 'Correspondence' within the meaning of this paragraph should be interpreted to cover also the exchange of electronic messages. Correspondence must, however, be limited to the elements which are necessary to answer a specific question. Unsolicited correspondence (in any form like e-mail, letter, fax, …) does not fall under the above exception and may constitute illegal advertising.

The Committee of Legal Affairs and Citizen Rights of the European Parliament has promoted a study on 'New technologies for the marketing and sale of medicines on the Internet and television networks', published in January 2001.[120] The following feasible policy options are proposed (the text has been edited slightly), based on an extensive survey of relevant stakeholders:

1. Modification of current EU legislation on advertisement and commerce of medicines by explicitly considering the particularities of electronic media and services. In the case of adoption of EU regulations on the e-commerce of medicines that are more restrictive than those existing in third countries, the possibility of confiscation of medicinal products arriving at EU borders/customs as a consequence of the mentioned e-commerce should be considered. This could have a discouraging effect on potential clients.

2. To support the establishment, by credible EU bodies, of quality standards and labels for health services on the Internet to help consumers to identify and filter the useful, safe and secure services.

3. To favour the creation (maybe in relation with the European Medicines Evaluation Agency) of a watchdog devoted to the follow-up of activities related to the marketing and commerce of medicines on the Internet.

4. To push the pharmaceutical industry to establish agreements on 'Good Internet marketing practice' that should serve as instruments of self-regulation.

5. To promote educational activities in order to provide EU Internet users with the relevant knowledge and skills in order to obtain the maximum benefit from new information technologies at minimum risk.

The *Financial Times* published an article entitled 'Brussels may ease curbs on drug promotion' on European Commission plans in which it quoted various officials.[121] According to the newspaper, the European Commission is proposing to relax the rules that prohibit pharmaceutical companies from promoting drugs for AIDS, asthma and

[120] http://www.europarl.eu.int/stoa/publi/pdf/99-07-01_en.pdf
[121] Michael Mann, David Pilling and Nicholas Timmins, Brussels may ease curbs on drug promotion. *Financial Times*, 13 June 2001.

diabetes direct to patients. It is not yet clear whether the DTC advertising would include television advertisements or be limited to, for example, newspaper, magazine and billboard advertising. These three experimental areas have been chosen because they involve long-term conditions and the medications used are the same across Europe. Interestingly, the plan would also allow drug companies to provide information to patients through the Internet:

> *Under the plan drug companies would also be allowed to provide information to individual patients or patient groups who approached them via their web sites – something that at present is technically illegal in Europe but which is becoming untenable given European access to US web sites where such restrictions do not apply.*

Beyond the broad guidelines that exist at the European level, advertising and promotional regulation occurs mostly at country level. However, because of European centralised authorisation, it is possible that the European level will become more relevant. In a report by McKenna and Andersen Consulting (now Accenture),[122] respondents were asked whether advertising relating to products with centralised authorisation should be the same in all member states. In general, respondents disagreed with this idea, since cultural differences and differences in medical practice inevitably lead to different advertising in different countries. Respondents were asked whether the EMEA should be responsible for regulating the advertising of products with centralised authorisation. Overall, 23% of companies responding to questionnaires relating to centralised authorisation holders agreed, with 74% disagreeing. Those who disagreed with giving the EMEA responsibility for advertising observed that the EMEA had no power to impose sanctions, and also pointed out that advertising is based on national rules. However, it was felt that the EMEA could have a co-ordinating role in this area.

On 16 December 1999, the European Community adopted regulation EC 141/2000 on 'Orphan Medicinal Products'.[123] Pharmaceutical and medical device companies can obtain 10-year marketing exclusivity for products targeting life-threatening or chronically debilitating diseases with a prevalence of not more than 5 affected persons in 10,000, if no satisfactory method of diagnosis, prevention or treatment yet exists. Additional provisions on the implementation of criteria were published on 27 April 2000.[124] In parallel, from 1999 to 2003 the European Community is investing €6.5m in a communication and interaction initiative.[125] For some of the actions priority will be given to projects using Internet technology,[126] which the authors believe can serve as an interesting platform for future e-marketing initiatives relating to rare diseases, for example to:

- Promote the development of, and access to, a coherent and complementary European information network on rare diseases, using the existing databases, among other things.

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[122] European Commission, Directorate-General Enterprise Pharmaceutical and Cosmetics, *Evaluation of the Operation of Community Procedures for the Authorisation of Medicinal Products*, by Cameron McKenna and Andersen Consulting (now Accenture), http://pharmacos.eudra.org/F2/pharmacos/docs/Doc2000/nov/reportmk.pdf
[123] http://pharmacos.eudra.org/F2/orphanmp/doc/141_2000/141_2000_en.pdf
[124] http://pharmacos.eudra.org/F2/orphanmp/doc/rev1/en1.pdf
[125] http://europa.eu.int/comm/health/ph/programmes/call/ojc00-174/call_en.pdf
[126] http://europa.eu.int/comm/health/ph/programmes/call/ojc00-174/workprog2001_en.pdf

- Contribute to training and refresher courses for professionals in order to improve early detection, recognition, intervention and prevention in the field of rare diseases.

- Promote transnational collaboration and networking between groups of persons directly or indirectly affected by the same rare conditions or volunteers and professionals involved, and co-ordination at Community level in order to encourage continuity of work and transnational co-operation.

- Support Community-level monitoring of rare diseases in member states and early warning systems for clusters, and promote the networking and training of experts concerned with the handling of rare diseases and with rapid response to the phenomenon of clusters.

In addition to pharmaceutical-specific regulation, the EU has also issued Directives that can affect Internet e-marketing and sales initiatives. At the IBC eHealth-europe conference,[127]Robert Williams, from Bird and Bird, highlighted the most important Directives:

Copyright Directive of April 9, 2001[128]

The new copyright directive regulates, among others, acquiring of copyrights, what is protected, and scope of protection rights. Pharmaceutical marketers need to remember asking for the authorisation of copyright owners to avoid infringement, even if small portions are taken.

Data Protection Directive of October 24, 1995[129]

Since health data is regarded sensitive data, processing of such data is prohibited unless

- the data subject has given his explicit consent to the processing of those data ('opt-in')

- processing is necessary to protect the vital interests of the data subject

- processing is carried out in the course of its legitimate activities with appropriate guarantees by a foundation, association or any other non-profit-seeking body with a political, philosophical, religious or trade-union aim and on condition that the processing relates solely to the members of the body or to persons who have regular contact with it in connection with its purposes and that the data are not disclosed to a third party without the consent of the data subjects

Above restrictions do not apply where processing of the data is required for the purposes of preventive medicine, medical diagnosis, the provision of care or treatment or the management of health care services, and where those data are processed by a health professional subject under national law or rules established

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[127] Robert Williams, Senior Solicitor, Bird and Bird, UK, IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.
[128] http://europa.eu.int/eur-lex/en/com/dat/1999/en_599PC0427.html
[129] http://europa.eu.int/eur-lex/en/lif/dat/1995/en_395L0046.html

by national competent bodies to the obligation of professional secrecy or by another person also subject to an equivalent obligation of secrecy.

E-Commerce Directive of June 8, 2000[130]

It has to be implemented into national laws by January 17, 2002, and provides provisions on contracting online and liability, which apply to anyone creating, managing, or hosting a website, including pharmaceutical marketers.

Regulation in the UK

The advertising of medicines is controlled by a combination of statutory measures (with both criminal and civil sanctions) enforced by the Medicines Control Agency (MCA), and self-regulation through Codes of Practice for the pharmaceutical industry, administered by trade associations, such as the Association of the British Pharmaceutical Industry (ABPI). According to the MCA,[131] the regulation of the promotion of medicines is based on the following legislation in the UK, which does not cover the Internet specifically since it is treated in the same way as any other medium:[132]

- The Medicines Act 1968
- Directive 92/28/EEC on the Advertising of Medicinal Products for Human Use (see above)
- The Medicines (Advertising) Regulations 1994, SI 1994/1932[133]
- The Medicines (Monitoring of Advertising) Regulations 1994, SI 1994/1933[134]
- The Medicines for Human Use (Marketing Authorisation etc.) Regulations 1994, SI 1994/3144[135]
- The Medicines (Advertising) Amendment Regulations 1996, SI 1996/1552[136]
- The Medicines (Advertising and Monitoring of Advertising) Amendment Regulations 1999, SI 1999/267[137]
- The Control of Misleading Advertising Regulations 1988, SI 1988/915.[138]

That the Internet poses a formidable challenge to regulators is demonstrated by a case treated at an MCA meeting on 15 July 1999 relating to advertising in the online *British Medical Journal* (http://www.bmj.com/):

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[130] http://europa.eu.int/eur-lex/en/lif/dat/2000/en_300L0031.html
[131] http://www.open.gov.uk/mca/
[132] The documents can be viewed on http://www.hmso.gov.uk/stat.htm
[133] http://www.hmso.gov.uk/si/si1994/Uksi_19941932_en_1.htm
[134] http://www.hmso.gov.uk/si/si1994/Uksi_19941933_en_1.htm
[135] http://www.hmso.gov.uk/si/si1994/Uksi_19943144_en_1.htm
[136] http://www.hmso.gov.uk/si/si1996/Uksi_19961552_en_1.htm
[137] http://www.hmso.gov.uk/si/si1996/Uksi_19961552_en_1.htm
[138] http://www.hmso.gov.uk/si/si1988/Uksi_19880915_en_1.htm

> *The Commission were updated on the developments in connection with the BMJ website which included advertisements for prescription only medicines. The MCA had concluded that the BMJ website was acceptable within the law on the basis that it was directed at professionals in the same way as the magazine was itself. It was recognised that if the public wanted access to the paper copy of the BMJ, this was available through public libraries. The BMJ had assured the MCA that there was no intention to extend advertising on their website to go beyond the material included in their journal. Advertisements were labelled to clearly indicate they were for health professionals, and there were no hyperlinks with pharmaceutical company sites. Advertisements could not be located via external searches.*

The ABPI has issued a Code of Practice for the pharmaceutical industry, which has been operating for nearly 40 years.[139] It is drawn up in accordance with UK law, and in consultation with the British Medical Association, the Royal Pharmaceutical Society of Great Britain and the Medicines Control Agency. Complaints under the code against companies and their staff are considered by the Prescription Medicines Code of Practice Authority Panel. The code has been amended for specific points related to the Internet, as outlined by Paul Woods,[140] which became effective as of 1 July 2001:

- UK jurisdiction applies, if the Internet site is placed by UK companies (or at their instigation, with their authority, or by affiliates), and includes information referring to UK use or availability.

- Written transcripts including graphs, tables, etc. need to be approved (certified).

- For open access sites, rules on information to the public apply (e.g. no promotional content). However, Summaries of Product Characteristics (SPCs) and Patient Information Leaflets (PILs) may be included provided they are not promotional in presentation (e.g. no hyperlinks, bold/italic text).

- No access control is needed for advertising in a relevant, independent electronic medical journal for healthcare professionals. However, abbreviated advertisements are not permitted, i.e. the prescribing information has to be included, and linked parts are treated as one ad. Banner advertisements must include a clear prominent statement indicating where to find prescription information.

The MCA has also issued guidance notes for labelling advertisements and promotions in electronic journals. Pharmaceutical marketers can promote to healthcare professionals on restricted-access sites. Each page needs to be labelled 'intended for health professionals', and it should be clear when the visitor is leaving the company site through links. While the UK government and the industry have worked together on the Pharmaceutical Industry Competitiveness Task Force (PICTF), they also agreed on the benefits of informed patients:[141]

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[139] 'Marketing and Medicines' by the ABPI, http://www.abpi.org.uk/publications/briefings/marketin.pdf

[140] Paul Woods, International Promotional Affairs, AstraZeneca, presentation at IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001, Barcelona.

[141] http://www.doh.gov.uk/pictf/pictf.pdf

> *The Government very much encourages better patient information and sees clear benefits to public health if patients are well informed by accurate, balanced material.*

Based on the final report of the PICTF, published in March 2001, the UK will move forward within the scope of existing EU law and establish, among others, guidelines on disease awareness programmes and the distinction between advertising and information:

> *An action plan is agreed between industry and the Medicines Control Agency (MCA) to look at the scope for moving forward within existing EU law. This will cover guidance on disease awareness programmes, including establishing scope for programmes where there is only one treatment available; will offer clarity on what could be included on pharmaceutical company websites under EU law and the scope for providing patient information already available in packs electronically in a more user-friendly way; and seek a practical definition of the distinction between advertising and information in Europe, with a view to the European Commission publishing guidance in this area. This work-plan represents a helpful package of measures.*

In the UK, pharmaceutical marketers are limited to spending up to about 9% of their turnover on promotional activities – mainly medical sales representatives, medical press advertising and literature. Based on the ABPI Code of Practice, sales representatives should not call on a doctor more than three times a year. A maximum of ten samples, not larger than the smallest representation on the market, can be supplied only in response to a written request, which has been signed and dated. The authors believe that the 'E-Commerce Directive' outlined above, in combination with the Directive on Electronic Signatures passed on 13 December 1999,[142] will allow for online ordering of samples.

It is no surprise, therefore, that the ABPI has endorsed the Internet as a cost-effective interaction channel, which allows doctors to pull information at their convenience, and supported the build-up of an electronic Medicine Compendium (eMC). The eMC is designed and operated on the Web by Virtual Health Network Ltd (VHN).[143] The content of the eMC is provided by Datapharm Communications Ltd, a non-profit company established by the Association of the British Pharmaceutical Industry (ABPI). The aim of the eMC is 'to provide information in a way that is useful, accessible and convenient for healthcare professionals, the pharmaceutical industry and the public'. The Compendium includes Summaries of Product Characteristics (SPCs) and Patient Information Leaflets (PILs) for each of the 10,000 prescription, pharmacy and over-the-counter medicines licensed in the UK.

Regulation in France

Luc Ravinet from Sanofi-Synthélabo[144] has presented and commented on the Internet-related recommendations of the French Medicines Agency 'Agence Française de

[142] http://europa.eu.int/comm/internal_market/en/media/sign/Dir99-93-ecEN.pdf
[143] http://emc.vhn.net/
[144] Luc Ravinet, Audit Promotion Department, Sanofi-Synthélabo France, IBC conference 'eHealth-europe: A New Era in Healthcare', 21–23 May 2001.

Sécurité Sanitaire des Produits de Santé' (AFSSAPS), and the French Association of Pharmaceutical Manufacturers 'Syndicat National de l'Industrie Pharmaceutique' (SNIP). After working separately on the issue, in December 2000 the two organisations established a joint task force to draw up recommendations. In general, information through the Internet must comply with the French Code of Public Health, which includes a regulation on pharmaceutical advertising. However, new favourable interpretations have been highlighted that relate both to consumers and healthcare professionals:[145]

Consumers:

- Healthcare information can include disease-specific information, but no indirect reference can be made to pharmaceutical products.

- The 'Résumé des caractéristiques du Produit' (RCP) can be reproduced in its entirety on Websites targeted at consumers, if it does not represent a promotional activity. Only the entire document can be used without highlighting any specific sections.

- Institutional press releases and hyperlinks to articles from third-party publishers can be offered on the Website. Press releases related to specific pharmaceutical products have to be targeted exclusively to journalists. This stringent regulation makes it impossible to comply with the recommendations of the 'Commission des Opérations de Bourse' to use the Internet for providing shareholders and possible investors with all useful information, which may influence the stock price. Obviously, this should include information on comparative efficacy and safety observed in clinical studies, especially for products in late-stage clinical trials.

Healthcare professionals:

- Bibliographic databases targeted at healthcare professionals are allowed to cover therapeutic areas, or specific indications, but cannot cover specific pharmaceutical products. It should be highlighted that certain articles are related to product use outside of the granted marketing licence. The database should guarantee objectivity and quality, and allow for searches by topic, author, or publication date. A (otherwise) pre-defined list of articles will be regarded as advertising.

- E-mail requests for articles can be answered, if healthcare professionals actively ask for it. Pharmaceutical marketers are not allowed to trigger such requests by sending out pre-defined lists or formatted selection forms.

- A calendar of congresses and symposia, with hyperlinks to the official congress Websites from the organisers, is allowed. Pharmaceutical companies cannot highlight any details on their sponsored parts, such as summaries.

Certain regulations pertaining to highly interesting interactive functionality will inhibit French pharmaceutical marketers from using the Internet effectively:

- Hyperlinks can be made only to homepages, clearly stating that the user is leaving the pharmaceutical site. Pharmaceutical companies are responsible for the links they create.

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[145] http://www.snip.fr/actualite/charteinternet.pdf

- Discussion forums cannot cover topics outside of granted marketing authorisation, rendering them irrelevant for healthcare professionals.

- User profiling and dynamic content based on the user's profile is not allowed, except if the user demands it.

At present, AFSSAPS insists on the filing of Websites by submission of one paper copy and three electronic copies, similar to traditional advertising. Furthermore, all changes have to be re-submitted, and already-approved Internet pages cannot be re-used for other Internet sites. This will make it difficult for pharmaceutical marketers to leverage the Internet themselves, and will probably limit the level of e-marketing initiatives in France.

Regulation in Germany

The German Ministry of Health, the 'Bundesgesundheitsministerium', regulates the advertising and promotion of pharmaceutical products by law. The law on advertising of health products, 'Gesetz über die Werbung auf dem Gebiet des Heilwesens (Heilmittelwerbegesetz)', was last revised on 18 April 2001 as a result of harmonisation of the German law with a European Directive on in vitro diagnostics,[146] and does not include Internet-specific sections.[147] The distribution of pharmaceutical products through e-pharmacies has been virtually impossible, as evidenced by the ongoing struggle of the Dutch e-pharmacy www.docmorris.nl. Both pharmacists and the Pharmaceutical Manufacturers' Association (Bundesverband der Pharmazeutischen Industrie, BPI[148]) are strongly opposing it.

According to Panos Kanavos and Christina Golna,[149] further guidelines related to scientific information and drug promotion, in line with the law, are set out by the BPI and followed on a voluntary basis. Advertising of prescription pharmaceuticals to the medical profession is allowed and must include details of composition, indications, and contraindications, side-effects and warnings. Any information given in the advertisements must be in line with that given in the registration approval. Following a written request, samples may be distributed – either for testing or educational purposes – to members of the medical profession, to a maximum of two samples per product.

In April 1999 the law committee of the BPI issued guidelines on 'pharmaceutical advertising on the Internet',[150] highlighting the following topics:

- According to the 'Law on unlawful competition', the district court of the Internet Website owner is the place of jurisdiction, or any district court where the Internet page can be viewed.

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[146] http://www.bmgesundheit.de/themen/arznei/medizinprod.htm

[147] Please note that this is not the most recent version of 19 October 1994, http://www.vrzverlag.com/esoterik/hwg.htm

[148] http://www.bpi.de/internet/bpi%2Dpressemitteilung/1999/pm99011.htm

[149] Panos Kanavos and Christina Golna, *Pharmaceutical Regulation in Europe: an industry challenge*, Informa Pharmaceuticals, 2000.

[150] *Pharmazeutische Industrie* **61(**9), pp. 809–811 (1999); reprints can be ordered from the BPI.

- If German users are targeted, German jurisdiction applies, even for international sites.

- Use of links and search engines has to be in line with the laws on unlawful competition, as well as with copyright and trade mark laws.

- Pharmaceutical companies are liable for the products they are advertising on the Internet, and are also responsible for any third-party quotes or links to other homepages.

- Image advertising is allowed, but should be clearly separated from product advertising.

- Product advertising to the public is not allowed for prescription drugs.[151] The use of pre-registered passwords, such as DocCheck®, is recommended when targeting healthcare professionals.

- Disclosure of Internet URL or e-mail addresses on the package insert is allowed, but the pharmaceutical company has to ensure proper communication mechanisms.

Adoption of the EU interpretative guidance related to consumers/patients will take more time in Germany. Currently, the use of the package insert on the Internet is considered DTC, and therefore forbidden. According to the BPI, efforts are ongoing to harmonise the German law with the EU, which is more difficult as changes in the interpretation of the law have to be officially agreed upon.

RELEVANT INTERNATIONAL ORGANISATIONS

In addition to organisations at the European and country-specific level, there are also many relevant international organisations. The International Federation of Pharmaceutical Manufacturers' Associations (IFPMA) has included an Internet addendum to its self-regulated Marketing Code. The World Health Organisation (WHO) has provided a guide to consumers and patients on healthcare information. In July 1996 the Health On the Net Foundation proposed the HONcode for healthcare information targeted at both laypeople and medical professionals. Today, several thousand sites display the HON logo. In May 2000 the Internet Healthcare Coalition issued an eHealth Code of Ethics, and now produces workshops for its implementation.[152] In the US, Hi-Ethics and URAC[153] have now initiated a Website quality accreditation process.

[151] The use of package inserts on public Websites is still considered illegal under German law. There is a note to the European Commission's interpretative guidance.
[152] http://www.ihealthcoalition.org/
[153] www.urac.org

International Federation of Pharmaceutical Manufacturers' Associations (IFPMA)

Through its member associations, the IFPMA represents the international pharmaceutical industry engaged in the research and development, and quality manufacturing of innovative therapeutic medicines. In 1981 it developed a set of marketing guidelines, the IFPMA Code, and made complaints procedures operational in 1982. An addendum relating to the use of the Internet was included in January 2000:[154]

> **Addendum 1: Use of the Internet**
>
> The research based pharmaceutical industry, represented by the IFPMA, strongly supports the right to use the Internet as a means of providing accurate and scientifically-reliable information on medicines in a responsible manner, for the benefit of patients, healthcare professionals and other appropriate parties. Recognizing patient safety is of paramount importance, IFPMA's goal is to encourage the appropriate use of the Internet.
>
> The IFPMA considers that there should be open access to all information put on the Internet by pharmaceutical companies. It accepts that there are national differences in the laws and regulations governing the promotion of medicines.
>
> Many pharmaceutical companies have established corporate sites on the Internet, which provide information about the company. Non-product related information is outside the scope of the IFPMA Code.
>
> The IFPMA recognizes that certain uses of the Internet may fall within the scope of the IFPMA Code of Pharmaceutical Marketing Practices. The following points concern product-related information:
>
> - The identity of the pharmaceutical company and of the intended audience should be readily apparent.
> - The content should be appropriate for the intended audience.
> - Links should be appropriate and apparent to the intended audience.
> - Country-specific information must comply with local requirements.

World Health Organisation

The 51st World Health Assembly (Resolution WHA51.9, May 1998) requested the Director-General of the WHO to develop a guide on medical products and the Internet. The guide was intended to serve as a model for member states to adapt the text into locally meaningful advice for Internet users in order to help them to obtain

[154] See the Marketing Code on http://www.ifpma.org/

reliable, independent and comparable information on medicinal products. It is summarised in five key points, targeted at consumers/patients:[155]

- If used properly, the Internet allows quick and easy access to health information. It provides useful information on such topics as diseases, conditions, therapies, medical products, and health and medical organisations and institutions.

- The information you obtain from the Internet can be helpful when you consult your doctor or other health care provider about your disease or condition. But the guidance from the Internet should not replace consultation with your health care provider.

- Although it is often difficult to determine, you still need to verify the source of information available on the Internet.

- Information that sounds too good to be true, in particular, requires verification and careful assessment.

- Be cautious about buying medical products via the Internet. In many countries, selling or buying medical products via the Internet may at present be an illegal activity. You are strongly advised to obtain your medical products through legitimate distribution channels such as pharmacies.

- Consult your doctor or other health care professional before you decide to treat yourself.

The WHO and the United Nations also recognised the potential of the Internet to achieve their objectives, and initiated a programme called 'Health InterNetwork', which aims to improve global public health by facilitating the flow of health information worldwide, using Internet technologies. In December 2000, the WHO and the Open Society Institute (OSI), a part of the Soros Foundation network, teamed up with leading information providers ISIÒ and SilverPlatter and other public and private partners to provide access to high-quality scientific information, via the Internet, to research centres in countries in Africa, Central Asia and eastern Europe.

Health On the Net

The Health On the Net Foundation (HON), created in 1995, is a not-for-profit international Swiss organisation. HON's mission is to guide laypeople or non-medical users and medical practitioners to useful and reliable online medical and health information. HON provides leadership in setting ethical standards for Website developers, and is as such recognised by many official bodies including the WHO. The HON Code of Conduct (HONcode)[156] has been adopted widely through self-regulation, and pharmaceutical marketers should insist that all their partners follow it:[157]

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[155] http://www.who.int/medicines/docs/medicines-on-internet-guide
[156] © Health On the Net Foundation.
[157] http://www.hon.ch/HONcode/Conduct.html

1. Authority

Any medical or health advice provided and hosted on this site will only be given by medically trained and qualified professionals unless a clear statement is made that a piece of advice offered is from a non-medically qualified individual or organisation.

2. Complementarity

The information provided on this site is designed to support, not replace, the relationship that exists between a patient/site visitor and his/her existing physician.

3. Confidentiality

Confidentiality of data relating to individual patients and visitors to a medical/health Web site, including their identity, is respected by this Web site. The Web site owners undertake to honour or exceed the legal requirements of medical/health information privacy that apply in the country and state where the Web site and mirror sites are located.

4. Attribution

Where appropriate, information contained on this site will be supported by clear references to source data and, where possible, have specific HTML links to that data. The date when a clinical page was last modified will be clearly displayed (e.g. at the bottom of the page).

5. Justifiability

Any claims relating to the benefits/performance of a specific treatment, commercial product or service will be supported by appropriate, balanced evidence in the manner outlined above in Principle 4.

6. Transparency on authorship

The designers of this Web site will seek to provide information in the clearest possible manner and provide contact addresses for visitors that seek further information or support. The Webmaster will display his/her E-mail address clearly throughout the Web site.

7. Transparency on sponsorship

Support for this Web site will be clearly identified, including the identities of commercial and non-commercial organisations that have contributed funding, services or material for the site.

8. Honesty in advertising and editorial policy

If advertising is a source of funding it will be clearly stated. A brief description of the advertising policy adopted by the Web site owners will be displayed on the site. Advertising and other promotional material will be presented to viewers in a manner and context that facilitates differentiation between it and the original material created by the institution operating the site.

CONCLUSION

The pharmaceutical industry often cites the stiff regulation in Europe as a key hurdle for Internet-based marketing, especially in terms of direct-to-consumer (DTC) advertising. Recent action taken by regulatory and/or self-regulating bodies has put this into perspective and increased the degree of freedom for pharmaceutical marketers. The EU has issued interpretative guidance related to the Internet, allowing the unmodified and unabridged publication of information authorised by Competent Authorities, such as the Summary of Product Characteristics or the package leaflet, to the general public. There might even be more favourable changes based on a study promoted by the European Parliament on the use of new technologies, such as the Internet, for the marketing and sale of medicines. According to the *Financial Times*, we might see a relaxation of DTC regulation in Europe, first on three diseases with common treatment across Europe: AIDS, asthma and diabetes.

At the country level, the UK seems to be the most advanced. As part of the Pharmaceutical Industry Competitiveness Task Force, the UK government and the pharmaceutical industry have agreed to move forward within the scope of existing EU law and establish, among others, guidelines on disease awareness programmes and the distinction between advertising and information. In addition, the Association of the British Pharmaceutical Industry (ABPI) has issued guidelines pertaining to Internet marketing and has also actively developed the electronic Medicine Compendium, a repository of information on all licensed pharmaceutical products to consumers and healthcare professionals fully compliant with local regulations. In France, the authorities have worked with the French Pharmaceutical Association to provide guidelines on the use of the Internet. The rigid submission and re-approval process for changes – one paper and three electronic copies have to be supplied to regulatory authorities – will probably limit the use of the Internet for direct pharmaceutical e-marketing, while increasing the need for partnerships with e-health suppliers. Germany does not yet have any specific marketing guidelines relating to the Internet, thereby increasing the dilemma of pharmaceutical marketers because the approved European interpretative guidance is less stringent. Finally, European pharmaceutical marketers also have to comply with international standards, such as the self-regulation guideline related to the Internet by the International Federation of Pharmaceutical Manufacturers' Associations, or widely accepted codes of conduct, for example the HONcode from the Health On the Net Foundation, which should also be followed by their e-health partners.

CHAPTER 8: RESOURCES – e-HEALTH SUPPLIERS

In a recent study of 40 FTSE 500 companies involved in e-business initiatives, Porter *et al*.[158] found that none had the capability to complete their e-business projects independently. All had engaged groups of firms that brought niche specialisms to their specific projects. Whilst this finding is by no means unique to the pharmaceutical industry, it is indicative of one of the problems faced by today's healthcare marketers – the European pharmaceutical industry has no end-to-end solutions provider.

The absence of an end-to-end provider should perhaps not come as too much of a surprise. Pharmaceutical e-marketing and sales covers an extremely diverse range of activities and it would be unreasonable to expect a single provider to deliver cutting-edge services across all areas. The result has been a somewhat fragmented supplier market with a huge range of similar offerings available. Determining the most appropriate initiatives on which to spend online budgets is something of a conundrum for today's healthcare marketers. Internet initiatives are still in their infancy and few data are available regarding return on investment (ROI) on these initiatives.

Where, then, should healthcare marketers target their budgets? Unfortunately, there is no silver bullet – but it should be remembered that suppliers do not have all the answers either. Willie Deese, a senior Vice-president at GlaxoSmithKline recently commented:

> *If we could buy it [a total solution] we would – and we'd rather – but we can't. The capability is there, but they [the suppliers] don't listen very well. They're hell-bent on selling us what they have, rather than what we need. They have to start listening and developing for us.*

We have segmented the supplier market into six segments, all of which provide a distinct value proposition to pharmaceutical marketers. Key for a successful relationship is defining a clear marketing strategy before contacting vendors, since they all offer solutions to reach very specific objectives. Without a clear strategy, marketers risk their implementations being driven by the technology solutions of their vendors, rather than the strategic needs of their products. The six segments are described below.

ONLINE AUTHORISATION SERVICES FOR MEDICAL PROFESSIONALS

Whilst the past few years have seen an increasing empowerment of healthcare consumers, the physician remains very much the gatekeeper of the European healthcare system. Though their omnipotence has been slightly dented by the vast quantities of healthcare information available to their patients on the Internet, they still effectively control the delivery of healthcare in Europe.

[158] Andrew Porter, Cliff London, Falk Rehkopf, Luigi, Luigi Zarro and Abigail Leland, 'Scoring Europe's eBusiness help', Forrester, February 2000.

Access to healthcare information in Europe remains one of the primary differentiators from the more liberalised US market. Even though vast quantities of information are available to patients, the nature of this information is strictly limited by stringent DTC regulations that prohibit the promotion of information concerning prescription drugs to consumers within all member states of the EU.

Although the recent decision by the Medicines Control Agency to allow medical journals to retain ads online has started the inevitable move to a more liberalised regulatory environment, this has been met with hostility in certain parts of the industry. Richard Ley from the ABPI argues:

> *I don't think it's appropriate for the UK or our type of market. In America, it's private healthcare, by and large. If a patient sees an ad, he says to the doctor 'I want this'. Here, health is provided by the state, and having a patient banging down the door demanding a drug is not an appropriate scenario.*

Managers at GSK think it will take 5 years for the DTC ban to be lifted, Roche believes it will be 4, Pfizer says 2. In the meantime the dissemination of promotional information will have to be strictly controlled if pharmaceutical companies are not to incur the wrath of the various regulatory bodies that exist within the EU. There is therefore a need for the provision of professional-only areas on sites to ensure that they do not contravene EU DTC laws.

The regulatory environment is not the only driver for the provision of professional-only areas on healthcare sites. The information and communication requirements of medical professionals differ hugely from their patients. Moreover, privacy and security are key issues that must also be addressed. The movement towards electronic medical records (EMR) can be achieved only if access is very strictly controlled. The ability to access quality, trusted information and to communicate with a community of respected peers is a key driver for medical professionals accessing the Internet – all of these requirements must therefore be met.

Until recently the provision of professional-only sites was made extremely difficult by onerous verification procedures. Before access could be granted details had to be verified with the respective medical body in their country of qualification – a procedure that could often take weeks. This had to be repeated for each new site entered, requiring medical professionals to remember a string of access IDs and passwords. Fortunately, there are now dedicated companies that provide outsourced verification services for medical professionals. However, most companies provide only country-specific or language-specific solutions, such as www.medipass.fr for French sites, or www.doccheck.com for German sites. There are currently very few truly global solutions, such as that provided by Physician Verification Services (www.verifies.com).

One note of caution, though. A number of pharmaceutical companies have instigated localised solutions to professional access owing to the largely decentralised nature of e-business initiatives. These have been driven largely by the perceived value of professional profiles to the pharmaceutical companies concerned. The unwarranted use of profile information is an absolute taboo in the medical community and should not be entered into lightly. Medical professionals already have a distrust of the information provided on corporate Websites, which they see as biased and subjective. Moreover, private access only to a local corporate site paints an extremely poor picture of corporate knowledge management.

ONLINE MARKET RESEARCH SOLUTIONS COMPANIES

The Internet and its associated technologies have become a primary vehicle for the dissemination of market research data, yet these data are still largely collected through traditional techniques. Although the technology exists to transfer these traditional techniques online and thereby to positively impact the primary issues of cost, turnaround, quality and coverage, investment to date has been disappointing. Even in the more advanced US market, the Internet accounted for only 5% of the total market research spend in 2000.[159] However, these expenditures are now rising with triple-digit growth rates and are expected to rise to between 25% and 40% over the coming few years.[160] Not surprisingly, Europe is still somewhat behind the curve but, with Internet penetration rates approaching those of the US, it is widely assumed that this gap will be closed in a very short time.

The relationship between market research and the pharma industry is indelibly linked, and with drug development costs reaching $300m and more for today's potential blockbusters the market research spend by pharma companies to ensure accurate market data on their likely success has to date been completely justified. Whilst the birth of pharmacogenomics has not yet sounded the death knell for the blockbuster, it is sure to change the market dynamics for market research expenditures. Development pipelines are at all-time high levels, with more than 100 medicines for heart disease and stroke, 350 for cancer, 100 for AIDS and over 200 targeted for children.[161] With time to market becoming an increasingly important determinant of a drug's likely success, the provision of timely and targeted market intelligence will become progressively more important.

With these bulging pipelines and the advent of an increasingly consumer-led healthcare society, the role of market research in the pharma industry will become ever more ubiquitous, impacting at all levels of the value chain. Whilst seemingly good news for market research companies, only those with the most agile strategies for identifying consumer (patients' and physicians') needs in a timely and costly fashion will prosper.

Traditional market research techniques have a number of downsides that only an integrated online strategy may serve to address:

- the logistics are extremely complex
- the calibre of physician/consumer is difficult to guarantee
- the quality of content is generally low
- the timing of a project ranges from 1 to 8 months
- costs can be significant.

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[159] Richard Windle and Elisabeth DeLanghe, 'The state of the Internet in Europe', NetEffects, ESOMAR, April 2000.
[160] Dirk Huisman, 'The state of the art of Internet research (pharma market)', EphMrA conference, June 2000.
[161] W R Hambrecht & Co., *Pharmaceutical Marketing for the Millennium*, February 2001.

Perhaps the greatest problems associated with traditional techniques come down to timing and targeting. Recruiting relevant patients or medical professionals pertinent to your targeted product across diverse geographies are costly and time-consuming exercises. How can you be certain you are targeting the most appropriate opinion leaders and early adopters? How can you be certain that the data collected will still be current when the analysis is completed?

www.comsort.com offers a novel software solution that graphically represents how physicians and other healthcare professionals communicate with each other. The identification of peer influencers and the networks through which that influence travels can greatly assist more effective e-marketing. www.medpanel.com has got around the problem of targeting by forming online relationships with exclusively contracted physicians and opinion leaders across a range of therapeutic areas from leading medical centres worldwide. This enables them to provide qualitative market research results at much greater speed and considerably less cost than through traditional techniques.

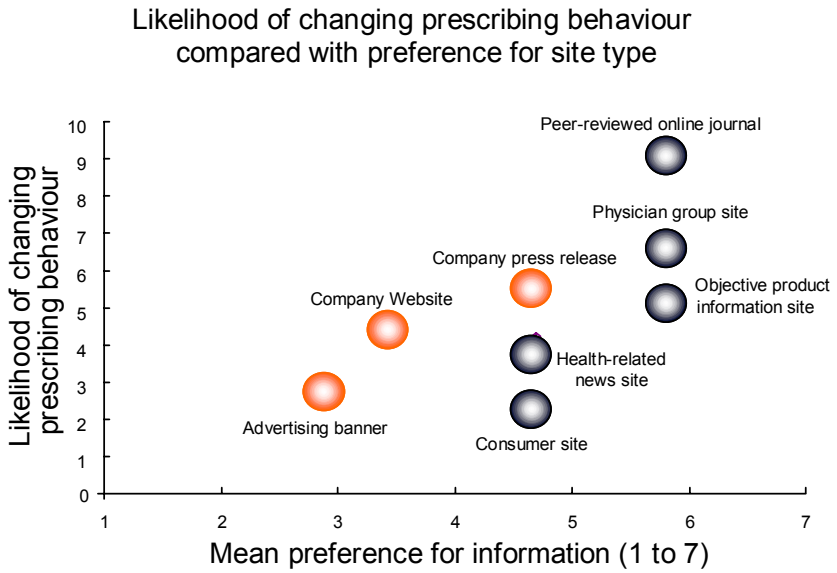
One final problem faced by today's e-health marketers is how to access suppliers with a true understanding of the European healthcare market. Because of the relative infancy of the industry in Europe, global suppliers like www.pslgroup.com are in very short supply. However, as the market develops over the next few years and sales cycles become less of an entry barrier, online qualitative research companies will attract significant interest owing to the ease with which they will be able to demonstrate significant returns on investment as compared with their more traditional adversaries.

REACH/TRAFFIC PROVIDERS

The early realisation of the potential revenue-enhancement opportunities afforded by the Internet precipitated a stampede by most pharmaceutical companies to get online. This was characterised by the deployment of a raft of '*brochureware*' sites offering little compelling value to target audiences. Recognising the limitations of their early efforts, companies then began to offer much higher degrees of personalisation and interaction through a mixture of interlinked corporate, branded product and non-branded disease management sites. The primary aim of these sites was to increase sales by establishing relationships with physicians and consumers and then using these relationships to influence their buying behaviour. However, as revealed by a recent Datamonitor report,[162] this strategy has one fatal flaw – it ignores consumer scepticism towards overt pharmaceutical company-owned sites (see Figure 8.1).

[162] Datamonitor, *Healthcare 2000*.

Figure 8.1: Preference for independent information



Source: Datamonitor

This presents an obvious problem: if you cannot drive consumers in sufficient numbers to your site, how are you going to achieve the end goal of influencing their buying habits? Our pharma survey highlighted reluctance on the part of healthcare marketers to invest significantly in disease management sites on the basis that they might aid their competition. Whilst the authors believe that this is simply a matter of providing appropriate differentiation, consider it from another angle – how can you gain a competitive advantage from others' investment spend? Commercial players, such as healthcare portals, have already made a very significant investment in the development of their user communities. Pharma companies have an unparalleled opportunity to target these communities through effective partnering strategies.

Healthcare portals can generally be segmented three ways – target audience (GPs, specialists, consumers/patients), geographic reach and subject area (general therapeutic area, specific disease). A comprehensive due diligence is essential prior to any partnership deal – claims of community numbers and financial stability are often exaggerated. Europe principally has general commercial portals for physicians and consumers, with several successful national sites, including www.doctors.net.uk, www.doctorsworld.com, www.atmedica.com and www.egora.fr. Competition is fierce and these sites are even coming under fire from the public sector with the launch of state-funded sites such as www.nhsdirect.nhs.uk. Only a small number of sites have managed to overcome the almost insurmountable obstacles to pan-European expansion (cultural differences, reimbursement policies, treatment options, pricing, operating overheads) including www.planetmedica.com and www.netdoktor.com among their number. Europe currently lacks specific deep and narrow portals, those that do exist being provided by associations and healthcare providers on a non-profit basis.

CONTENT PROVIDERS

With the proliferation of healthcare-related sites on the Internet, the ability to differentiate your content from that of your competition is becoming increasingly important. Consumers are becoming increasingly confident in their ability to find health-related information on the Web and have an almost limitless choice as to where they can obtain it. The goal for pharma companies is to find the right formula of components that impels doctors and patients to return to their site, thereby creating brand loyalty.

In its January 2001 report entitled *Patients, Physicians, and the Internet*, BCG attempted to categorise the type of information that patients and physicians were most interested in (see Figures 1.3 and 1.4 in Chapter 1).

The report indicates a preference on the part of both physicians and patients for more in-depth health information. As patients become increasingly confident in their ability to manage their healthcare, they are no longer satisfied with broad and shallow information sources. There is an increased demand for information that is both narrow and deep, a fact indicated by the high stated preferences for in-depth information and the latest research results. Interestingly, the report shows a converging trend as far as the information needs of patients and physicians are concerned. This is an important indicator of how Websites are evolving towards providing three-way connectivity between consumers, physicians and pharma companies.

Healthcare content can be sourced from an ever-increasing array of providers. The majority of portals, medical publishers and e-care companies are increasingly offering content syndication services in order to bolster their meagre Internet revenues. Although by no means a definitive list, European content providers range from medical journals (www.bmj.com, www.thelancet.com), to medical publishers (www.reedelsevier.com, www.unitedbusinessmedia.com), to portals (www.netdoktor.com, www.adis.com), to Internet companies (www.skila.com). The selection of content partners should be carried out only when a clear and comprehensive strategy for targeting your consumer audience has been formulated. Content deals can become extremely costly when measured against the initial returns on investment of Websites and should therefore be selected extremely carefully. Syndication by content partners is another thorny issue – it is essential that you are aware who else is using the information you are buying. Exclusivity clauses should be explored where possible if you wish to capture and maintain a strategic advantage over your competitors.

e-CARE COMPANIES

The e-care company segment will become an increasingly important provider to pharma companies searching for offerings that are compelling and interactive but, more importantly, demonstrate a return on investment. Although the boundaries of DTC are being pushed further all the time and consumers have an ever more voracious appetite for healthcare information, it has proved difficult to date to convert this interest into bottom-line revenues. So far, the majority of Internet strategies have

focused on differentiating products in an attempt to change buying behaviour. Although these strategies will eventually bear considerable fruit, there is another area that must also be addressed – the area of patient compliance.

Various research studies have estimated that 50% of patients who are prescribed a medication are non-compliant: i.e. 33% do not fill the prescription or do not take the medication at all, and 17% do not take it precisely as prescribed.[163] This is a serious issue for the healthcare industry that affects patients, physicians and pharmaceutical companies alike. The consequences of non-compliance for patients may include delayed recovery from illness, increased severity of illness, or the need for more intensive treatments or hospital admissions. These will all serve to increase physicians' already burgeoning workloads and further stretch Europe's healthcare infrastructure. European pharmaceutical companies stand to lose hundreds of millions euros in lost revenues.

The most prominent players in the e-care segment are disease management companies offering their services online and, more recently, through wireless devices. The majority are currently US based, but increasingly these companies are targeting the European healthcare market. www.lifechart.com is a globally operating company providing portable health monitoring devices and associated online compliance services for conditions including asthma, diabetes and cardiovascular complaints. www.infomedics.com provides software solutions that automate the collection, analysis and distribution of patient self-reported information. In addition to the one-stop-shop providers, collaborations with technology providers are becoming increasingly common. Teva Marion recently set up a partnership with www.softwatch.com, a provider of Internet technology platforms, to develop www.mswatch.com – a Website targeted at strengthening compliance amongst multiple sclerosis sufferers.

e-MARKETING/SALES SOLUTIONS

A recent study carried out by www.skila.com based on interviews with e-business and marketing executives found that 63% revealed e-commercialisation, including sales, marketing, customer relationship management and e-commerce as their primary e-business priority.[164] This finding was further corroborated by the recent Cap Gemini Ernst & Young/INSEAD study amongst 100 senior pharma managers in which 68% of those interviewed stated that improving their customer relationships through e-marketing and sales was their primary focus.[165] With marketing and sales spend approaching 25% of pharma revenues it is not surprising that this segment has been most heavily targeted by the industry's e-suppliers.

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[163] R.B. Coambs, P. Jensen, M. Her *et al*., *Review of the Scientific Literature on the Prevalence, Consequences, and Health Costs of Non-adherence and Inappropriate Use of Prescription Medication in Canada*, Health Promotion Associates, June 1995.
[164] www.eyeforpharma.com/print.asp?news=15063
[165] Cap Gemini Ernst & Young and INSEAD, *Vision & Reality: The Quantum Shuffle – the impact of e on the pharmaceutical and medical device industries*, 2001.

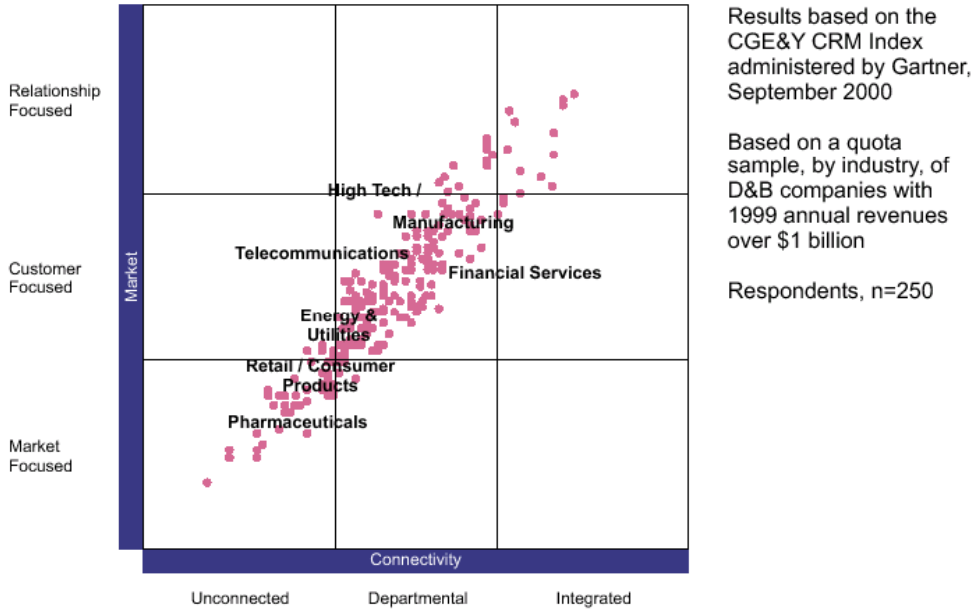
But therein lies the problem. The vast number of suppliers peddling similar products with little or no differentiation is perhaps one of the primary reasons why pharma e-marketing initiatives are currently moving at such an ambulatory pace. The vast array of choice is an extremely confusing proposition for healthcare marketers. Already struggling with how to develop the correct mix of online and offline tactics, they are tasked with identifying tomorrow's 'killer apps' – even though none yet have any proven return on investment. Based upon our surveys amongst healthcare marketers and e-suppliers we have separated the e-marketing and sales solutions segment into three discrete areas, as described below.

e-CRM

When compared with other industries, pharma ranks near the bottom in its adoption of e-CRM (see Figure 8.2). This is not surprising, given its historical focus on product, but it is a situation that will need to be remedied if pharmaceutical companies are to achieve their primary objective of moving closer to their customers. Sales force automation systems are no longer sufficient since they are limited to current methods of interaction. As customer touchpoints increase through ever more novel electronic means it is essential that a centralised method for controlling every customer interaction is deployed.

The implementation of e-CRM cannot be achieved without some fundamental changes to the processes and behaviours that govern marketing and sales. The extent of these changes and how the transition is to be managed must govern the selection of the chosen solution – not the other way around. The movement towards e-CRM

Figure 8.2: Effectiveness of CRM implementation by pharmaceutical companies



Source: Cap Gemini Ernst & Young CRM Index, administered by Gartner, September 2000

represents what can only be described as a paradigm shift in the industry – from product focus to customer concentricity. The difficulties in achieving this successfully must not be underestimated. It is absolutely crucial that e-CRM initiatives receive the sponsorship and investment they deserve and that employees are involved in the full cycle, from insight to implementation.

Without doubt, the current global leader in multi-channel CRM solutions is www.siebel.com, along with its partner www.synavant.com. However, there are a number of players providing CRM solutions to the European market including Dendrite, Cegedim and Stay in Front.

e-Detailing

In its *Healthcare 2000* report, Datamonitor estimates that 75% of total pharma sales and marketing spend is allocated to traditional physician detailing. Whilst this goes some way to explain the huge growth in sales force sizes over the past decade, it also highlights why the pharma industry has such high hopes for e-detailing. With an ever-expanding portfolio of drugs, pharma are finding it increasingly difficult to target European physicians effectively.

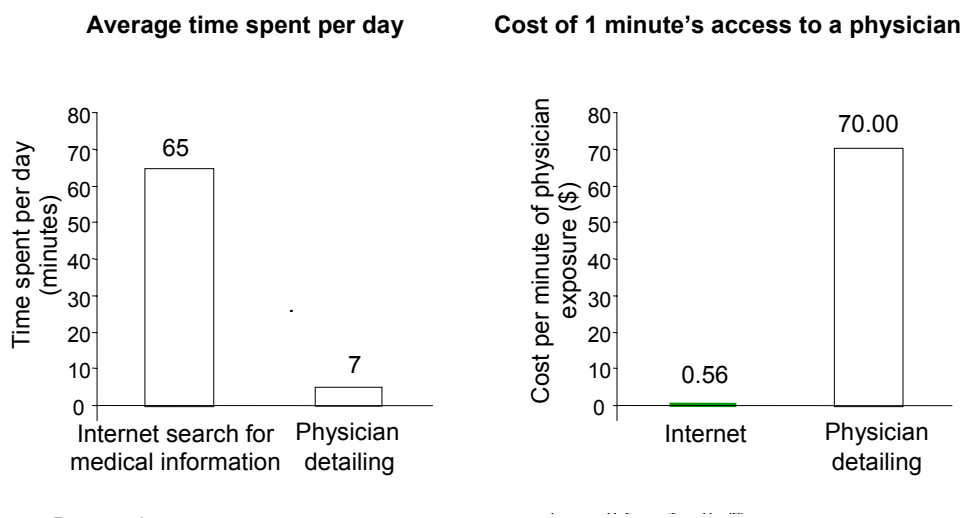
Thomas Ebeling, President and CEO of Novartis Pharmaceuticals, recently summed up the mood in the industry:

> *My last experience was a wake-up call. Twenty-five reps would visit a doctor each day, only eight getting in to see him. Our strategy is to be the share-of-voice leader in each of our brands because the doctor listens more to the leader. In order to increase the odds of being one of the eight reps who are seen, Novartis needs not a bigger sales force, but a bigger amplifier.*

Figure 8.3 illustrates why e-detailing may well be that amplifier. Physicians are spending an increasing proportion of their time on the Internet – 10 times more than that for traditional detailing. Whilst many question the effectiveness of the Internet as a medium for detailing, how effective are today's traditional techniques? Medical reps typically detail three drugs during their average 7 minutes spent with a physician. Is 2 minutes really a sufficient time for a drug that spent up to 10 years in development? Finally, there are the cost implications – e-detailing is estimated to be over 100 times more cost effective than traditional detailing techniques.

Companies providing e-detailing services can generally be split into two groups. The first of these provide 'push' technology to disseminate medical information to physicians on demand and include companies such as www.allscripts.com, www.MyDrugRep.com and www.medsite.com. www. iPhysicianNet.com exemplifies the second type, which enable real-time exchange of information between physicians and pharmaceutical companies by utilising broadband video conferencing technologies. Whilst there is room in the market for both types of supplier, the success of either will rest with pharma's ability to recruit sufficient numbers of physicians who will consistently use these services.

Figure 8.3: Online versus offline access to physicians



Source: Datamonitor

e-CME

Whilst e-CME may not be considered as a core sales and marketing activity, it does provide a cost-effective method for targeting medical professionals with drug-specific disease and treatment information. According to several sources, the average cost per viewer for an online CME presentation represents 10% of the usual cost per viewer when happening live. e-CME also has the added advantages of providing a closed learning environment, a control on content quality and the ability to target individuals who are unable to attend live events.

According to a recent report by the Rowin Group,[166] e-CME is currently being offered by over 150 companies. These include www.physinteractive.com, www.medsite.com, www.medscape.com, www.rxcentric.com, www.e-medhosting.com and www.ventiv.com. The number of suppliers in the market is testament to the impact e-CME is envisaged to have on the medical education market. The minimal levels of broadband access across Europe are currently constraining the adoption of e-CME, but when this becomes commonly available the market will consolidate around those able to provide the most compelling content and interactive functionality.

Technology platforms

The realisation by pharmaceutical companies that their investments to date in building an online presence have resulted in sub-optimal ROI has led an increasing number to form partnerships with strategic platform providers. The proprietary solutions developed by internal marketing and IT resources have consistently failed to deliver the levels of interactivity and content demanded by consumers and medical

[166] Rowin Group, *e-Detailing, e-CME, PDAs and Other e-Promotional Tools – physicians' attitudes and experiences, and role in pharmaceutical promotion*.

professionals. In order to engage their target audiences more effectively, healthcare marketers are now having to consider not just the Internet but interactive television, WAP, 3G and PDA technologies. The only way this can be done successfully is through aligning with specialist providers.

Teva Marion recently formed a partnership with www.softwatch.com, a provider of Internet technology platforms, to develop the hugely successful www.mswatch.com Website targeted at strengthening compliance amongst multiple sclerosis sufferers. Leveraging the increased penetration of PDAs amongst the medical community, www.epocrates.com has entered into partnership with Palm Pilot to provide a range of clinical software for handheld devices. Nokia has partnered with www.lifechart.com to provide remote patient monitoring services through WAP access to the Web. The shortage of internal resources need no longer be used as an excuse by pharmaceutical companies for inactivity – the technology is available, it is the strategy that is lacking.

e-CSOs

According to a recent report by W R Hambrecht & Co., the CSO market has grown faster than 35% for the last 4 years, reaching approximately $1bn in 2000.[167] This growth has been due largely to pharmaceutical companies having to concentrate their internal marketing efforts on high-growth 'blockbuster' drugs as product portfolios have become increasingly crowded. For example, GlaxoSmithKline recently announced plans to focus promotions on 20 lead products, leaving 15–20 smaller products under-promoted. Rather than divesting these products and benefiting only from one-off payments, pharmaceutical companies can now enter into lucrative gain-share deals with CSOs that guarantee an ongoing share of profits.

Market-leading CSOs such as www.ventiv.com and www.quintiles.com have recently been concentrating on providing Internet solutions that complement and integrate with their existing services. The advent of e-CSOs may provide a more cost-effective means for healthcare marketers to discover which online marketing strategies are likely to prove effective in the long term. Rather than committing scarce online budgets to an array of experimental initiatives, healthcare marketers could learn directly from e-CSO experimentation. This method of learning is particularly salient to companies experiencing problems in attracting e-nabled staff. However, while it may be cost effective in the short term, the lessons will need to be learned extremely quickly, or CSOs will gain a competitive advantage that may prove unassailable.

CONCLUSION

The huge amount of choice provided by the myriad of e-health suppliers in the market leaves today's healthcare marketers with an extremely complex conundrum. Which horse should they back? Obviously there is no straightforward answer to this question, but there are a number of ground rules that must be obeyed before deciding.

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[167] W R Hambrecht & Co., *Pharmaceutical Marketing for the Millennium*, February 2001.

First, never be led by a suppliers' technology solution, no matter what claims may accompany it. Successful online strategies can be driven only by the needs of the business. Although technology solutions may enable the delivery of your online strategy they should not be allowed to define it. Second, recognise that nearly all suppliers are trying to prove their solutions in the market – they do not come with guarantees. Where possible, ensure that you enter into shared-risk agreements. This will ensure that you not only maintain close alignment with your suppliers but, more importantly, you will maximise your chances of a successful outcome. Third, retain control of your projects – do not pass all responsibilities to the suppliers you engage. Any solution must be actively sponsored, otherwise it will never be adopted internally. Fourth, ensure that all learning points are communicated effectively to all relevant parts of your organisation. It is essential that learning is iterative and that other parts of the business are not constantly reinventing the wheel. Fifth, remember to ensure that performance metrics are defined prior to the deployment of any solution. Where possible, these performance metrics should be an integral part of your contract with the supplier and should tie directly to the objectives set for each project. Finally, don't be scared by new technologies and their suppliers, they will not replace traditional marketing and sales techniques, they will simply serve to enhance them.

APPENDIX 1: QUESTIONNAIRE FOR PHARMACEUTICAL COMPANIES

This questionnaire has been prepared by almasan Limited on behalf of Informa Global Pharmaceuticals & Healthcare. The purpose of this questionnaire is to provide data for an industry-wide report on successful approaches to e-marketing and sales in the European pharmaceutical industry. The survey will be supported in France by Basil Strategies. As a key executive leading e-business activity in your company, your input is requested to help prepare a report that is up-to-date and comprehensive. Participation is voluntary and information reported will be used or quoted only on an aggregate or anonymous basis. Exceptionally, we may wish to use your reported experiences directly as the basis for case studies, in which case you will be contacted for permission prior to any publication.

Co-ordinates

1.1. Your details
- Name
- Position
- Telephone
- Country
- Email

1.2. Company details
- Name
- Location
- Business unit/department

(In the questions that follow, where asked, please respond to the business unit you have identified above)

1.3. Country where head office is located
- Location

Capturing the e-Business Opportunity

2.1. Who are your Internet marketing goals targeted towards? (Please select one.)
- Professionals only
- Patients only
- Both targets
- Other (please specify)

2.2. For your company, what are the most important marketing goals to achieve using the Internet in the next year? (Please rank from 1 = most to 5 = least important.)
- Create brand/product awareness
- Create disease/therapeutic area awareness
- Generate online sales revenue
- Incremental market share growth
- Globalise marketing operations
- No goals defined

2.3. What is the size of your business unit's marketing budget for the next year? (Check [tick] the range that most closely matches your national budget.)

Marketing budget

- <€1,000,000 or less
- €1,001,000–2,500,000
- €2,501,000–5,000,000
- €5,001,000–10,000,000
- €10,001,000–25,000,000
- €25,000,000 or more

2.4. What percentage of your business unit's marketing budget will be dedicated to e-marketing initiatives?
Percentage of marketing budget dedicated to e-marketing initiatives

2.5. How does your marketing/headcount budget compare with last year's? (Check [tick] one only.)

- Greater than
- Less than
- Unchanged

Organising for e-Business

3.1. How many full-time employees are dedicated to the e-marketing needs of your business unit (including external parties such as consultants)?

- 0
- 1–5
- 6–10
- 11–20
- 21–50
- 50+

3.2. What have been the most important sources of new full-time equivalents (FTEs?) (Please rank sources from 1 = most to 5 = least important):

- Internal recruitment or promotion
- Targeted external recruitment
- Contractors (full-time)
- e-Health company partnerships
- Consultants

3.3. What independent e-business units exist within your company? (Check [tick] all that apply.)

- New business funding (external)
- New business incubation (internal)
- General e-commerce department
- Internet-enabled sales
- Internet-enabled marketing
- Other (please specify)

3.4. How are e-initiatives selected in your company? (Please rank selection methods from 1 = most to 5 = least important):

- Existing functional department makes selection
- e-Business department selects
- IT department selects
- Political or individual choices
- Rigorous cost–benefit analysis

Realising the Potential of e-Marketing and Sales

4.1. What have been the primary methods of segmentation for the e-marketing initiatives your company has undertaken to date? (Check [tick] all that apply.)

- By disease/therapeutic area
- By product or brand
- By doctor characteristics
- By patient characteristics
- By patient lifestyle
- By geographic/cultural area
- Other (please specify)

4.2. What interactive devices have been utilised in realising your e-business strategy to date? (Check [tick] all that apply.)

- Internet/World Wide Web
- Digital TV
- Mobile phone
- Personal digital assistant (PDA)
- Internet kiosks
- Other (please specify)

4.3. Which of the following do you believe will become 'killer apps' (extremely successful applications) for the healthcare industry? (Check [tick] all that apply.)

- Business-to business markets or exchanges
- Business-to-consumer direct marketing
- Customer profiling (patient or doctor)
- Clinical trial management
- e-Continuous Medical Education
- e-Detailing
- Disease management
- e-Learning
- Other (please specify)

4.4. What have been the primary obstacles to achieving business unit e-marketing goals? (Please rank from 1 = most to 5 = least important.)

- Lack of support from headquarters
- Lack of local management sponsorship
- Lack of suitably qualified resources
- Hostile regulatory environment
- Lack of Internet penetration in country
- Budgetary constraints
- Other (please specify)

The Strategic Outlook for e-Business

5.1. A report by Ernst and Young in May 2000 (entitled 'In a Field of Force, Trends Shaping the Health Industry') suggested that the five trends listed below will have a major impact on the future of healthcare. Please rank these trends according to your own view of their impact on healthcare (from 1 = most to 5 = least important).

- An ageing population
- The rise of consumer activism
- The biotechnology revolution, especially genomics
- The increasing cost of healthcare provision
- The 'new economy' or Internet revolution

5.2. How do you see the Internet impacting your job in the next 2–3 years?

5.3. If any, which marketing relationships will be affected first by the Internet? (Check [tick] all that apply.)

- Opinion-leading physicians
- No-see physicians
- General practitioners
- Specialists
- High-prescribing physicians
- Low-prescribing physicians
- Consumers (pre-treatment)
- Patients (under treatment)
- Other (please specify)

5.4. What will be the three biggest changes over the next 5 years in pharmaceutical marketing in Europe? You are invited to consider and/or comment on the following: new high-tech products, patient communities, direct-to-consumer marketing, physician-to-physician interactions, physician-to-patient interactions, new e-health intermediaries, non-traditional channels to market.

APPENDIX 2: QUESTIONNAIRE FOR e-HEALTH SUPPLIERS

This questionnaire has been prepared by almasan Limited ('almasan') on behalf of Informa Global Pharmaceuticals & Healthcare. The purpose of this questionnaire is to provide data for an industry-wide report on successful approaches to e-marketing and sales in the European pharmaceutical industry. The survey will be supported in France by Basil Strategies. As a key supplier of e-business solutions to the healthcare industry, your input is requested to help prepare a report that is up-to-date and comprehensive. Participation is voluntary and information reported will be used primarily to create a profile of your company and its offerings – it is therefore in your interest to provide comprehensive answers. Exceptionally, almasan may wish to use your responses directly as the basis for a quotation in the body of the report, in which case you will be contacted for permission prior to any publication.

Co-ordinates

1.1. Company details
- Company name
- Contact
- Office address
- ZIP/Postal code
- City
- Telephone
- Facsimile
- Email
- Website

1.2. Country where head office is located
- Location

Business Overview

2.1. What is the company's business model?

2.2. What is the company's revenue model?

2.3. What is the current state of the company's financing?
- Start-up, funded
- Privately funded
- First-round funded
- Second-round funded
- Funded pre-IPO
- Publicly listed company
- Other (please specify)

2.4. What are the company's three primary business objectives for the next 3 years?

2.5. What are the major constraints to achieving the primary business objectives stated above? (Please rank their importance to revenues, from 1 = most to 5 = least important.)
- Internal financing

- Hostile regulatory environment
- Client budgets
- Availability of quality resources
- Competitive environment
- Economic downturn

Industry and Market

3.1. To which parts of the healthcare market are your core products and services specifically targeted? (Please rank their importance to gaining market penetration, from 1 = most to 5 = least important.)

- Medical professionals
- End-consumers
- Corporate bodies
- Government agencies
- Regulatory bodies
- Internet start-ups

3.2. Who are your main competitors and what services do they provide?

3.3. What are your company's key differentiators to its competition? (Please rank their importance to differentiation, from 1 = most to 5 = least important.)

- Price
- Quality of product/service
- Speed of implementation
- Geographical coverage
- Market penetration/coverage
- Client support

Organisation

4.1. How important are the following parties in defining the strategic direction of your company? (Please rank their importance to strategy, from 1 = most to 5 = least important.)

- Founders/appointees
- Corporate bodies
- Advisory board
- VC/strategic investors
- Business angel(s)

4.2. What areas of Europe is your business most active in? (Please rank their importance to revenues, from 1 = most to 5 = least important.)

- UK/Eire
- France/Benelux
- Germany/Switzerland
- Spain/Portugal/Italy
- Scandinavia

4.3. How many employees do you have dedicated to the European market?

- 0
- <10
- 10–25
- 26–50

- 50+

Products and Services

5.1. What methods of revenue generation are most important to your company? (Please rank their importance to revenues, from 1 = most to 5 = least important.)

- Licensing
- Transactional
- Shared revenue
- Consulting services
- Royalties (from partnerships)

5.2. What products and services do your current partnerships and alliances provide to the European market? (Check [tick] all that apply.)

- Authorisation services
- Market research providers
- Content providers
- e-Care companies
- e-Marketing/sales solutions
- Other (please specify)

Client Base

6.1. What key factors will guarantee your company's success in penetrating the European healthcare market?

6.2. How does your company source client implementations across Europe? (Check [tick] all that apply.)

- In-house
- Contractors
- Consulting/integration partners
- e-Health company partnerships
- Other

6.3. What types of clients does your company currently have in Europe? (Check [tick] all that apply.)

- Large pharmaceutical
- Biotechnology
- Medical devices
- Health insurance
- Government
- Internet start-ups
- Other (please specify)

Sales and Support

7.1. What is the company's chief method of business development? (Check [tick] all that apply.)

- Existing relationships
- Cold calling
- Advertising
- Word of mouth
- Referrals

- Other

7.2. What are your company's forecasted sales revenues from the European market for 2001?

- <€100,000
- €101,000–250,000
- €251,000–500,000
- €501,000–750,000
- €751,000–1,000,000
- >€1,000,000

7.3. Which support services are most in demand from your user base? (Please rank their importance, from 1 = most to 5 = least important.)

- On-site support
- Call centres
- Online help manuals
- Offline help manuals
- Other

Trends

8.1. What three emerging trends will have the most profound effect on pharmaceutical marketing in the next 5 years?

APPENDIX 3: QUESTIONNAIRE FOR 'eHEALTH-EUROPE' IBC CONFERENCE, 21–23 MAY 2001, BARCELONA

Demographics of the Surveyed Audience

1. Who do you work for?
   - Top 15 pharmaceutical company
   - Other pharmaceutical company
   - Biotechnology company
   - Medical devices company
   - e-Supplier company
   - Other

2. Where are you based?
   - UK
   - France
   - Germany
   - Scandinavia/Benelux/Switzerland
   - Southern/eastern Europe
   - US
   - Asia
   - Other

3. What is your main geographic responsibility?

   - Global/corporate
   - European/regional
   - Country specific
   - Other

4. What function/role do you have?
   Pharma, biotech, medical devices
   - e-Business/e-commerce
   - Marketing and sales
   - Information technology
   - Other functions, e.g. R&D, BD&L

   e-Suppliers
   - CEO/MD/President
   - Management
   - Other

   Other (more details)
   - Regulatory/government
   - Financial institution/investor
   - Other

5. How long did you work in e-health or e-business/e-commerce?
   - Never
   - Less than 12 months
   - 12–24 months
   - 2–4 years

- More than 4 years

Organising for e-Business

For representatives not from pharmaceutical, biotech, or medical device companies, please answer based on your assessment of the top 15 pharma companies.

6. How many full-time employees are dedicated to e-business/e-commerce in your company (including external parties)?
   - 0
   - 1–5
   - 6–10
   - 11–20
   - 20–50
   - 50+

7. How are e-business/e-commerce initiatives typically selected?
   - Existing functional departments make selection
   - e-Business/e-commerce functions make selection
   - IT department selects
   - Individual or political choices
   - Other/do not know

8. What is the size of your company's e-business/e-commerce budget in 2001?
   - <€1m
   - €1–5m
   - €5–15m
   - €15–50m
   - >€50m
   - Do not know

9. What has been the primary obstacle to achieving e-business/e-commerce goals?
   - Lack of corporate management support
   - Lack of local management support
   - Lack of suitably qualified resources
   - Hostile regulatory environment
   - Budgetary constraints
   - Language and cultural differences
   - Other/do not know

10. How does your headcount/external budget compare with last year?
    - It is greater than last year
    - Smaller than last year
    - Unchanged

e-Nabling Pharmaceutical Processes Across the Value Chain

For representatives not from pharmaceutical, biotech, or medical device companies, please answer based on your assessment of the top 15 pharma companies.

11. If you had to provide a quick ROI, where would you invest first?
    R&D
    - Clinical trials

- Internal collaboration tools
- External R&D portals

Marketing and sales

- Physician marketing and sales
- Consumer/patient initiatives
- CRM

Supply chain management

- New B2B distribution channels
- New B2C distribution channels
- e-Procurement solutions
- Other/do not know

12. Where would you invest for long-term benefits first?

R&D

- Clinical trials
- Internal collaboration tools
- External R&D portals

Marketing and sales

- Physician marketing and sales
- Consumer/patient initiatives
- CRM

Supply chain management

- New B2B distribution channels
- New B2C distribution channels
- e-Procurement solutions
- Other/do not know

13. Where does your company currently invest most?

R&D

- Clinical trials
- Internal collaboration tools
- External R&D portals

Marketing and sales

- Physician initiatives
- Consumer/patient initiatives
- CRM

Supply chain management

- New B2B distribution channels
- New B2C distribution channels
- e-Procurement solutions
- Other/do not know

14. Who is targeted most by your e-nabling company initiatives?

- Internal employees (B2E)
- Businesses (B2B)
- Medical professionals
- Consumers/patients
- Other/do not know

15. How do you typically implement e-nabling initiatives?

- Immediately global
- Local pilot first
- Specific diseases/products first

- Specific functions first
- Other/do not know

Winning Approaches for Online Marketing and Sales

For representatives not from pharmaceutical, biotech, or medical device companies, please answer based on your assessment of the top 15 pharma companies.

16. Whom do you target most with online marketing and sales initiatives?
- Internal employees (B2E)
- Businesses (B2B)
- Physicians
- Other medical professionals
- Consumers/patients
- Other/do not know

17. Which relationships do you anticipate to be affected first by the Internet?
- Opinion-leading physicians
- No-see/non-visited physicians
- General practitioners
- Specialists
- High-prescribing physicians
- Consumers (pre-treatment)
- Patients (under treatment)
- Other/do not know

18. What is the most important marketing and sales goal to achieve using the Internet?
- Create brand/product awareness
- Create disease/therapeutic area awareness
- Provide marketing information to physicians
- Provide marketing information to patients
- Generate online sales revenue
- Accelerate market uptake for new products
- Increase market share
- Globalise marketing operations
- No goals defined
- Other/do not know

19. What is the primary segmentation for e-marketing and sales initiatives?
- By disease/therapeutic area
- By product or brand
- By doctor characteristics
- By patient characteristics
- By patient lifestyle
- By geographic/cultural area
- Other/do not know

20. What will be the 'killer app' for online marketing and sales?
- Business-to-business markets or exchanges
- Business-to-consumer direct marketing
- Profiling of patients
- Profiling of doctors

- Experience trial management (phase IV/marketing trials)
- e-Learning internally
- e-Continuing Medical Education
- e-Detailing to physicians
- Compliance/disease management
- Other/do not know

Emerging Opportunities in e-Health

21. When will e-health become a commercially viable business model in Europe?
    - Never
    - <12 months
    - 1–3 years
    - 3–5 years
    - >5 years

22. Which business model will win?
    - Content
    - Commerce
    - Connectivity
    - Care
    - None of these simple ones
    - Other/do not know

23. Which European country will become the e-health leader?
    - UK
    - France
    - Germany
    - Scandinavia
    - Benelux/Switzerland
    - Southern/eastern Europe
    - Do not know

24. What will the biopharmaceutical and medical device companies undertake in e-health in the next 2 years?
    - Big bets, e.g. major acquisitions
    - Strategic bets, e.g. mostly organic leveraging own assets
    - Exploration, e.g. mostly around own products
    - Wait-and-see, e.g. focus on e-nabling
    - Not do anything
    - Other/do not know

APPENDIX 4: SUPPLIERS

In compiling this report, almasan, www.almasan.com (supported by Basil Strategies, www.basilstrategies.com) conducted an Internet-based survey targeting e-health suppliers. The survey solicited input across the six different segments highlighted in this report as the most relevant for Internet-based marketing and sales, namely e-marketing solution providers, traffic/reach providers, e-care providers, content providers, authorisation providers and market research providers. We would personally like to thank the companies profiled below for their participation in this survey.

Atmedica (http://www.atmedica.fr) is an international knowledge-based company that specialises in providing medical content solutions to the healthcare industry, through the deployment of information technology. The company, which first started in France in 1998, now has offices in Europe, the US and Asia-Pacific. Atmedica is jointly owned by Vivendi Universal and MediMedia.

Conceptis Technologies (http://www.conceptis.com) is an e-health company that creates medical speciality Web communities tailored to the educational and informational needs of physician specialists. Conceptis' Websites provide healthcare professionals worldwide with current, sophisticated information as well as commentary and analysis in the key topics and issues central to their speciality practice. Other Conceptis offerings include Clinical Trial Central, a Web-based product for training, education, communication and management of clinical trials. Conceptis Technologies is a private company located in Montreal, Quebec.

Founded in 1993, Cyber Dialogue (http://www.cyberdialogue.com) is an Internet customer relationship management company that provides the tools, data and services that enable senior marketing professionals to identify, segment and target online consumers. The company's customer management platform provides strategic consumer information, advanced database marketing techniques (including tracking, targeting and measurement software) and data mining services to send the most relevant message to the right customers at the right time.

Dendrite (http://www.dendrite.com) designs and supports technology-based knowledge systems that enhance the competitive activities of sales forces of the world's largest pharmaceutical companies. Over one-third of the pharmaceutical sales representatives and their managers in more than 57 countries worldwide rely on Dendrite to provide these services to maximise representative effectiveness in the field. With headquarters in Morristown, New Jersey, Dendrite employs over 1,800 people around the world.

Egora (http://www.egora.fr) is a healthcare portal sponsored and owned by France Telecom. It provides personalised medical information to both healthcare professionals and the general public. Egora employs a dedicated editorial team consisting of medical journalists and professionals and is the first French-language healthcare portal.

ePocrates (http://www.epocrates.com) is the largest handheld physician network enabling quick point-of-care access to important clinical information. In less than 9 months the ePocrates network grew to over 95,000 users, including over 65,000 physicians. In addition to the qRx clinical drug database containing information on over 1,600 of the most commonly prescribed drugs, ePocrates will soon provide formulary decision support tools, up-to-date medical and general news and other transactional-based services. It has headquarters in San Carlos, California.

IBM Healthcare Consulting (http://www.ibm.com) develops and implements innovative solutions throughout the healthcare industry. A pioneer in healthcare information technology, IBM Healthcare Consulting remains at the forefront of improving how healthcare organisations deliver efficient, quality care. In combination with its global network of business partners and strategic alliances, it delivers powerful e-business technology and comprehensive services that enable healthcare organisations to achieve lasting success.

Impelsys (http://www.impelsys.com) is a software solutions company based in India, providing outsourced software application development and maintenance services to clients worldwide. Impelsys works closely with healthcare clients to determine technology requirements and, in turn, to custom-design offshore models that are both efficient and cost effective. Impelsys provides innovative solutions expressly designed to power healthcare clients' long-term growth.

Interactive1 (http://www.interactive1.com) provides interactive solutions for the rapid development of Web-based systems, enabling clients to take advantage of Internet, interactive television, WAP, 3G and PDA technologies. Using a combination of existing products and dedicated offshore development capabilities, Interactive1 designs and builds cost-effective online systems. In addition to designing and deploying systems, it also offers eBusiness strategy, security, user testing and marketing consultancy services.

Founded in 1994, LifeMasters (http://www.lifemasters.com) offers population-based, interactive health management services that combine technology and clinical expertise to improve patient outcomes and reduce the cost of care. LifeMasters' programmes integrate lifestyle modification, nursing support, patient education, biometric monitoring and early intervention to create an effective communications bridge between physician and patient. Services also include data mining, predictive modelling, patient identification and risk stratification. Customers include payers, providers and employer groups.

MedHermes (http://www.medhermes.fr) is a business-to-business Internet company targeting medical doctors. MedHermes' vision is to become the 'Information and service provider of choice for the physician, and the best promotional platform for pharmaceutical companies'. MedHermes was launched in France in summer 2000, with other countries subsequently following.

Mednet Media (http://www.mednetmedia.com) is an international specialist healthcare eStrategy and eMarketing consulting firm that ensures that leading healthcare companies create and sustain measurable business results leveraging the advantages of the online environment – including network effects, scalability and value matching. It ensures achievement of measurable business and marketing goals while effectively strengthening the relationship with the precise target audiences.

MedPanel (http://www.medpanel.com) provides medical-related industries with qualitative primary research, high-impact targeted marketing methodologies and in-depth medical market trend analysis. MedPanel's competitive edge results from the use of its proprietary Internet-based technology and its relationship with exclusively contracted physicians from leading academic medical centres worldwide. These services, harnessing targeted online input from MedPanel's network of medical opinion leaders, provide companies with valued guidance and in-depth exposure at greater speed and considerably less cost than has ever before been possible.

Medscape (http://www.medscape.com) provides digital health record systems and information to the healthcare industry. It develops digital health record applications designed to improve healthcare through the timely delivery of clinical data and information to healthcare professionals and consumers. The company also provides online health information including medical news, articles and conference coverage through its Internet portals, Medscape.com and CBSHealthWatch.com. Its products and services are designed to enhance and improve the quality, cost, efficiency, safety and outcome of healthcare.

Medsite (http://www.medsite.com) uses the power of the Internet to provide a full suite of online marketing and educational services that broaden reach, cement relationships and deliver rewards to physicians. Over the years, it has forged strong relationships with physicians by offering user-friendly, high-quality products and medically relevant gifts through Medsite Rewards™. Medsite has transactional online relationships with over 125,000 physicians and 50,000 medical students. Using this experience, it has developed a range of innovative services that provide mutually beneficial interactions between sought-after physicians and the organisations that want to reach them.

Multimedica (http://www.multimedica.de) is the leading online provider of medical services to both physicians and pharmacists in Germany. Its contents cover products from the most important medical and pharmaceutical specialist publishing houses and editorial contributions such as specialist compendia and information lines, conference reports and forums moderated by recognised experts. With Multimedica, physicians and pharmacists are able to enter the entire world of online information in their field of activity as well as take advantage of an extensive range of attractive services.

NetDoktor (http://www.netdoctor.co.uk) is Europe's leading e-healthcare company with a presence in nine leading Internet markets: the UK, Germany, Austria, Denmark, Norway, Sweden, France, Italy and Spain. NetDoktor offers individual care and health services for consumers, doctors and sufferers of chronic conditions. By implementing e-care applications, NetDoktor seeks to improve the delivery of healthcare services for patients, while eliminating inefficiency in healthcare systems.

Optas (http://www.optas.com) is a leading provider of direct-to-consumer (DTC) marketing tools to the pharmaceutical industry. Founded in 1997, Optas provides easy-to-deploy marketing tools, Internet experience, industry alliances and consulting expertise that dramatically increase the return on investment of healthcare DTC programmes. The company's products are Web-based tools that all support the end-to-end marketing process.

Physicians Interactive (http://www.physinteractive.com) (PI) leverages the technology of the Internet and other media to provide interactive healthcare product education solutions for physicians, healthcare professionals and patients. It delivers a consistent and substantive product message, while yielding an outstanding return on investment and dramatically increased market share. Physicians Interactive is a division of Allscripts Healthcare Solutions.

Physician Verification Services (http://www.verifies.com) develops and operates an Internet password utility that provides online identification of physicians and other prescribing healthcare professionals with a single universally accepted password. The service is free to qualified prescribers and requires no software installations on computers. PVS will not reveal the identity of users without their express approval. Currently, PVS operates in the US and Europe (with a European base in the UK).

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