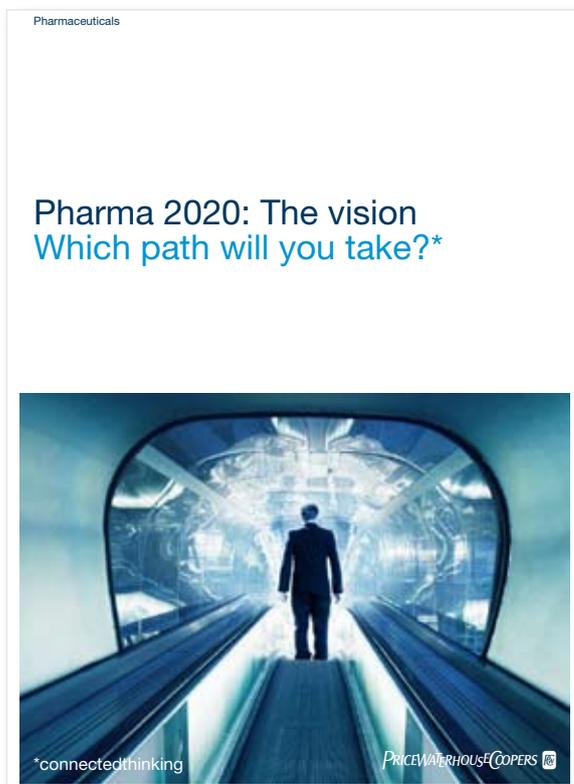


Pharma 2020: Marketing the future

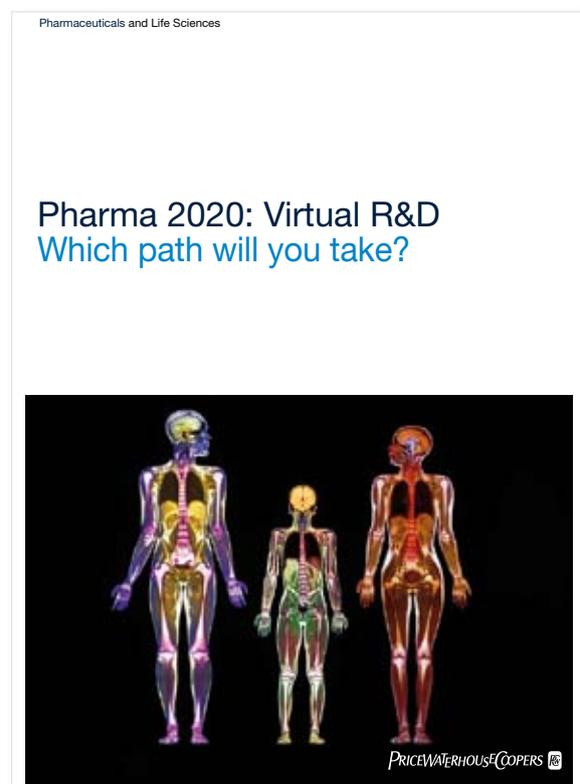
Which path will you take?



Previous publications in this series include:



Published in June 2007 this paper highlights a number of issues that will have a major bearing on the industry over the next 11 years. The publication outlines the changes we believe will best help pharmaceutical companies realise the potential the future holds to enhance the value they provide to shareholders and society alike.



This report published in June 2008 explores opportunities to improve the R&D process. It proposed that new technologies will enable the adoption of virtual R&D; and by operating in a more connected world the industry, in collaboration with researchers, governments, healthcare payers and providers, can address the changing needs of society more effectively.

“Pharma 2020: Marketing the future” is the third in this series of papers on the future of the pharmaceutical industry published by PricewaterhouseCoopers. It discusses the key forces reshaping the pharmaceutical marketplace, including the growing power of healthcare payers, providers and patients, and the changes required to create a marketing and sales model that is fit for the 21st century. These changes will enable the industry to market and sell its products more cost-effectively, to create new opportunities and to generate greater customer loyalty across the healthcare spectrum.

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Introduction

The social, demographic and economic context in which the pharmaceutical industry (Pharma) operates is changing dramatically, as we noted in “Pharma 2020: The vision”, the White Paper PricewaterhouseCoopers* published in June 2007 (see sidebar, **Seven major**

trends reshaping the pharmaceutical marketplace).¹ All these challenges have major ramifications for the way in which Pharma markets and sells the medicines it develops – the subject on which we shall focus here.

The industry has traditionally relied on aggressive marketing to promote its products. One recent study estimates

that, between 1996 and 2005, total real spending on pharmaceutical promotions rose from US\$11.4 billion to US\$29.9 billion in the US (the only country for which expenditure on all major marketing and sales activities is available).² Another study suggests that the true figure (including meetings and e-promotions) is closer to US\$57.5 billion in real terms.³

Seven major trends reshaping the pharmaceutical marketplace

The pharmaceutical marketplace is changing dramatically, with huge implications for the industry as a whole. We have identified seven major socio-economic trends.

The burden of chronic disease is soaring. The prevalence of chronic diseases like diabetes is growing everywhere. As greater longevity forces many countries to lift the retirement age, more people will still be working at the point at which these diseases start. The social and economic value of treatments for chronic diseases will rise accordingly, but Pharma will have to reduce its prices and rely on volume sales of such products because many countries will otherwise be unable to afford them.

Healthcare policy-makers and payers are increasingly mandating or influencing what doctors can prescribe. As treatment protocols replace individual prescribing decisions, Pharma’s target audience is also becoming more consolidated and more powerful, with profound implications for its sales and marketing model. The industry will have to work much harder for its dollars, collaborate with healthcare payers and providers, and improve patient compliance.

Pay-for-performance is on the rise. A growing number of healthcare payers are measuring the pharmaco-economic

performance of different medicines. Widespread adoption of electronic medical records will give them the outcomes data they need to determine best medical practice, discontinue products that are more expensive or less effective than comparable therapies and pay for treatments based on the outcomes they deliver. So Pharma will have to prove that its medicines really work, provide value for money and are better than alternative forms of intervention.

The boundaries between different forms of healthcare are blurring. The primary-care sector is expanding as clinical advances render previously fatal diseases chronic. The self-medication sector is also increasing as more prescription products are switched to over-the-counter status. The needs of patients are changing accordingly. Where treatment is migrating from the doctor to ancillary care or self-care, patients will require more comprehensive information. Where treatment is migrating from the hospital to the primary-care sector, patients will require new services such as home delivery.

The markets of the developing world,

where demand for medicines is likely to grow most rapidly over the next 13 years, are highly varied. Developing countries have very different clinical and economic characteristics, healthcare systems and attitudes towards the protection of intellectual property. Any company that wants to serve these markets successfully will therefore have to devise strategies that are tailored to their individual needs.

Many governments are beginning to focus on prevention rather than treatment, although they are not yet investing very much in pre-emptive measures. This change of emphasis will enable Pharma to enter the realm of health management. But if it is to do so, it will have to rebuild its image, since healthcare professionals and patients will not trust the industry to provide such services unless they are sure it has their best interests at heart.

The regulators are becoming more risk-averse. The leading national and multinational agencies have become much more cautious about approving truly innovative medicines, in the wake of problems with medicines like Vioxx.

*“PricewaterhouseCoopers” refers to the network of member firms of PricewaterhouseCoopers International Limited, each of which is a separate and independent legal entity.

Much of this increase in spending has gone on the expansion of the sales force. However, many of the industry's biggest markets are now saturated with sales representatives, and its selling techniques are becoming increasingly ineffective (see sidebar, **Too many cooks spoil the broth**).⁴

Hence the fact that returns on detailing (sales visits to doctors) have begun to decline in the developed world. Between 2004 and 2005, there was a 23% drop in dollar growth per detail in the US, although detailing still accounts for more than half the market share new brands win during their first year of life. The picture is rather more varied in Western Europe, but detailing plays a much smaller role in stimulating sales in these countries.⁵

Conversely, detailing is still very important in many developing nations. In China, for example, nearly three-quarters of the information doctors receive about new medicines comes from meetings with sales representatives and conferences.⁶ But here, too, resistance to "irresponsible" marketing practices is growing,⁷ and, in May 2007, the member governments of the World Health Organisation passed a resolution to enact or enforce legislation banning the "inaccurate, misleading or unethical promotion of medicines".⁸

Direct-to-consumer (DTC) advertising – the other big weapon in Pharma's marketing artillery – has also failed to deliver all that the industry expected. Only two countries – the US and New Zealand – currently allow companies to market their medicines directly to consumers, although the European Commission is considering a proposal to lift the ban on direct communications that provide "objective...non-

Too many cooks spoil the broth

Between 1996 and 2005, the number of US sales representatives nearly doubled to 100,000, although the number of practising physicians rose by just 26%. The market is getting very crowded in other countries, too. In a recent poll of British general practitioners, respondents reported receiving an average of four visits a month and five promotional mailings a week. Similarly, one Malaysian doctor participating in a study of promotional practices in emerging countries was approached by 16 multinationals and nine local generics companies within a five-week time span.

The battle for market share has triggered considerable alarm. Some 20% of US and British doctors now refuse to see any sales representatives. The regulations governing the behaviour of sales representatives are also getting tougher. Various US states have passed laws requiring pharmaceutical companies to report all gifts or payments to healthcare professionals exceeding \$25, while Australia has banned pharmaceutical companies from providing doctors with personal gifts, entertainment or lavish hospitality.

Several industry trade groups have likewise introduced new codes of practice – and they are actively enforcing the rules. The Prescription Medicines Code of Practice Authority (PMCPA), which administers the code of practice laid down by the Association of the British Pharmaceutical Industry, is one such instance. The PMCPA "names and shames" the most serious offenders, by reprimanding them publicly and publicising the violations they have committed in advertisements in the medical and pharmaceutical press.

promotional" information.⁹ And Pharma's spending on DTC advertising only accounts for about US\$5 billion, which is just 14% of its total marketing budget.¹⁰ However, the jury is still out on just what this expenditure provides.

In the early days, the returns appeared to be substantial. Between 1999 and 2000, sales of the 50 products that were most heavily advertised in the US soared by 32%, compared with an average increase of 13.6%.¹¹ But more recent research suggests that DTC advertising has little, if any, long-term impact on demand. In one study published in the *British Medical Journal*, the researchers compared the uptake of three medicines in two populations – English-speaking Canadians exposed

to US advertising and French-speaking Canadians, who primarily watch French-language media – over a five-year period. They found that DTC advertising had no effect on sales of two of the three products and that, although sales of the third spiked by more than 40% when the campaign began, the spike was quite brief.¹²

Much of the industry's expenditure on DTC advertising may have been pointless, but the damage to its reputation is arguably a more serious problem. In January 2008, the US House of Representatives Committee on Energy and Commerce initiated an investigation into the misleading and deceptive advertising of medicines, after several particularly flagrant abuses of the rules.¹³

Table 1: Big Pharma has been slashing its workforce

Company	Announced Job Cuts
Pfizer	10,000
AstraZeneca	7,600
Merck & Co.	7,200
Bayer	6,000
Schering-Plough	5,500
Johnson & Johnson	5,000
GlaxoSmithKline	5,000
Amgen	2,600
Novartis	2,500
Wyeth	1,200
sanofi-aventis	700
Total	53,300

Source: PricewaterhouseCoopers

In short, aggressive marketing – whether it be to doctors or patients – is becoming increasingly ineffective as a means of stimulating demand for new therapies and overcoming reluctance to pay premium prices for products that are deemed to offer only minor clinical improvements. Industry critics are also becoming increasingly vociferous in their complaints that it is wasteful or even unethical.

Big Pharma has responded with various cost-cutting measures. Pfizer set the pace in late 2006, when it said that it would cut 20% of its US sales force.¹⁴ Other companies rapidly followed suit and, by October 2008, the industry leaders had announced plans to shed another 53,300 jobs, many of them in marketing and sales (see **Table 1**).¹⁵ They are now turning their attention to developing countries like India, where 10 multinationals are reported to be trimming the number of sales representatives they employ.¹⁶

However, both industry executives and commentators recognise that the failings of the current marketing and sales model cannot be addressed simply by reducing the size of the sales force; the problems go very much deeper. We believe that they stem from three incorrect assumptions, namely that:

- Pharma alone determines the value of its products
- Products alone create value; and

- The buying and selling of medicines is based solely on technical data like safety and efficacy, as distinct from subjective criteria like quality of life.

We shall discuss the changes that have invalidated these assumptions in more detail in the next chapter.

What will the healthcare landscape look like in 2020?

For many years, pharmaceutical companies decided what their products were worth, and priced them accordingly. But healthcare policy-makers, payers and patient groups are now playing an increasingly important role in the valuation process – and this trend will accelerate, as healthcare expenditure everywhere continues to soar.

The aging of the population, together with dietary changes and more sedentary lifestyles, is driving up the disease burden in both developed and developing countries.¹⁷ People's expectations are also rising as new therapies for treating serious illnesses like cancer reach the market. The global healthcare bill has risen commensurately; between 2000 and 2006, expenditure on healthcare as a percentage of gross domestic product (GDP) climbed in every country in the OECD.¹⁸

Many policy-makers and payers have therefore started trying to measure exactly what they are getting for their money. A number of countries, including Australia, Canada, Finland, New Zealand and the UK, have established agencies specifically to conduct formal clinical and economic evaluations of medicines. The US Senate is also considering a bill to create a Health Care Comparative Effectiveness Research Institute, which would perform a similar function.¹⁹

Similarly, some governments are actively encouraging the use of e-prescribing (see sidebar, **The push for e-prescribing**).²⁰ The main aim of these efforts is to reduce prescribing errors. But e-prescribing will also enable healthcare payers to influence the prescribing decision much more easily, by providing doctors with clinical and financial information at the very point at which they are choosing which products to prescribe.

This will have a major impact on the decisions doctors make. In one recent survey, for example, two-thirds of the physicians participating in a US e-prescribing initiative reported that they were more likely to prescribe a generic or plan-preferred medicine when using an e-prescribing system. Analysis of some 3.3m e-prescriptions bore out their claims; 39% of those that failed to comply with the formulary requirements were changed when the

doctor was electronically notified that the product concerned was off plan.²¹

E-prescribing has enormous commercial implications for Pharma. Most of the activities it performs to market its medicines to doctors take place *before* the prescribing decision is made – and e-prescribing could mitigate that influence, unless the industry can collaborate with healthcare payers to shape the information doctors receive. However, healthcare payers will want hard proof that a product really is safer, more effective or more economical than its rivals, and they will have many more resources to investigate such claims than any individual doctor or practice.

With greater use of pharmaco-economics, strict formularies and e-prescribing, healthcare policy-makers and payers are increasingly assessing the relative value of different medicines. Patients are playing a bigger part in the process, too. Indeed, they are even helping to decide which products should reach, or remain on, the market. Patient power was a critical factor in the decision to approve Herceptin for use on the British National Health Service (NHS) in the treatment of early-stage breast cancer, for example.²²

Patients will become even more influential, as access to reliable healthcare information increases, the use of co-payments proliferates and the trend towards self-medication

The push for e-prescribing

More than 70% of all doctors in Denmark, the Netherlands and Sweden write prescriptions electronically, and the European Union is promoting the practice in other member states. Doctors in Darwin, Australia, are also testing a new system that, if successful, could be rolled out nationwide, and the US has just passed a new law to increase e-prescribing among doctors participating in the Medicare programme. Eligible physicians will receive a 2% bonus for writing electronic scripts in 2009 and 2010, dropping to 1% in 2011 and 2012, and 0.5% in 2013. But penalties will be imposed on those who do not use e-prescribing by 2012.

Interest in e-prescribing is not confined to the developed world. India's largest retail pharmacy chain, Apollo Pharmacies, has recently started offering doctors and patients an e-prescription service. Similarly, the Turkish government has launched several e-prescribing pilot programmes as part of a bigger initiative to establish a national health network, and the Russian Ministry of Health and Social Development introduced new prescribing rules, including computer-readable prescription forms for the beneficiaries of federal and regional insurance schemes, in 2007.

grows (see sidebar, **Health 2.0 hits the headlines**).²³ Public expenditure still accounts for the bulk of healthcare spending in every G7 country except the US, but patients in the E7 countries typically foot more than half the bill themselves (see **Figure 1**).

The split between public and private healthcare spending is also changing in some G7 countries, as they try to reduce the burden on the public exchequer. In Britain, for example, the government recently gave permission for cancer patients to buy “top-up” drugs privately, without losing their right to free care under the NHS.²⁴

Conversely, in the US, President Barack Obama plans to put a bigger share of healthcare costs on the public tab, by expanding coverage to uninsured Americans. He has also promised to lower the cost of medicines by allowing the importation of safe products from other developed countries, increasing the use of generics in public programmes, taking on pharmaceutical companies that block cheaper generics from the market and eliminating the ban on the federal government negotiating drug prices.²⁵ But, whether it is patients, governments or health insurers who are picking up the costs, one thing is clear: the days when pharmaceutical companies could dictate how much their medicines should fetch, without regard for the other stakeholders in the healthcare arena, are over.

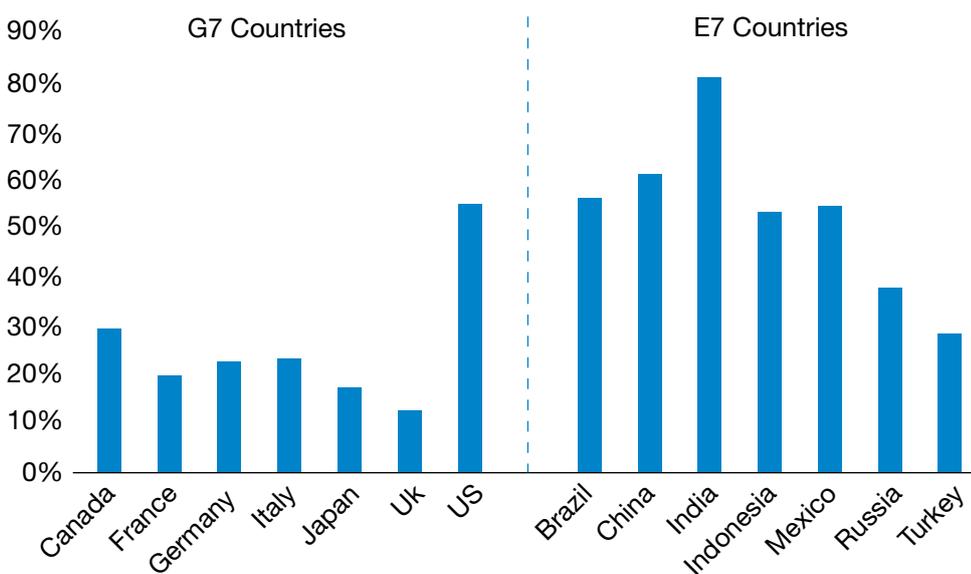
The opportunities for generating value from pure product offerings are also rapidly diminishing. In the past 15 months, at least three companies have started offering personal genome

Health 2.0 hits the headlines

The number of people using the Internet to find healthcare information has increased dramatically over the last decade. Some 66% of US adults go online to research their conditions, as do more than half of all Europeans. Numerous blogs and online forums have also sprung up to cater for increasingly information-hungry patients. They include sites such as patientslikeme.com, which enables patients to compare symptoms and side effects; medhelp.org, where doctors and patients work together to create “wikis”; and various disease-specific forums for patients with conditions like cancer and epilepsy.

The next stage in the so-called Health 2.0 revolution is the proliferation of electronic personal health records. Microsoft and Google have both launched services to help people create and store their own personal health records on the World Wide Web. But there are many other, smaller companies offering similar services, including myPHR.com, medicalrecords247.org and ihealthrecord.org.

Figure 1: Private expenditure on health as a percentage of total healthcare spending in the G7 and E7 countries



Source: World Health Organisation, “World Health Statistics 2008”

services for the masses. 23andMe (which is backed by Google) charges just US\$399 to analyse people’s DNA and tell them how likely they are to suffer from more than 90 health conditions and inherited traits. deCodEme (a branch of the Icelandic genetics company deCODE Genetics) and Navigenics offer more comprehensive versions of this service for US\$985 and US\$2,500, respectively.²⁶ Cheap gene sequencing and disease disposition analysis will fuel popular demand for targeted medicines and personalised healthcare.

By 2020, electronic medical records, e-prescribing and remote monitoring will also give healthcare payers and providers in many countries access to extensive outcomes data, as we indicated in “Pharma 2020: The vision”. They will then be able to determine

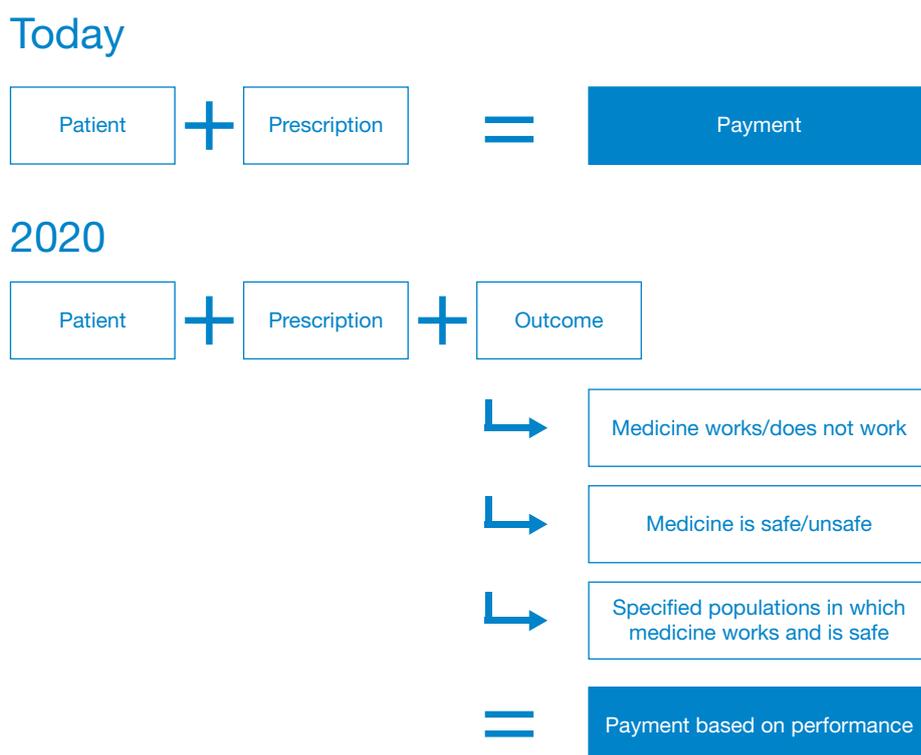
which medicines are particularly safe, efficacious and cost-effective in different patient populations, and include such information in their treatment protocols (see sidebar, **On the right track**).²⁷ They will also be able to revise the prices they pay upwards or downwards, depending on how specific medicines perform over time (see **Figure 2**).

The industry has already been forced to take the first steps down the path to pay-for-performance. In the UK, for example, reimbursement of Velcade, Johnson & Johnson’s new cancer treatment, is contingent on proof of a measurable reduction in the size of a patient’s tumour.²⁸ Similarly, payment for Lucentis, Novartis’s therapy for age-related macular degeneration, is subject to a dose-capping scheme under which the company bears the costs of treating

On the right track

Numerous new sources of clinical data are emerging. The US National Comprehensive Cancer Network has, for example, established an oncology database to collect socio-demographic, clinical and non-clinical information on patients suffering from various forms of cancer. The American Medical Group Association has set up a system to let doctors share comparative outcomes data, so that they can treat their patients more effectively. And the International Serious Adverse Events Consortium aims to develop genetic markers for identifying which individuals are at risk of experiencing serious drug-related adverse events.

Figure 2: By 2020, pay-for-performance will be the norm in many countries



Source: PricewaterhouseCoopers

any patient who requires more than 14 injections.²⁹ The British government now plans to extend this approach, with a flexible pricing system under which the prices of new medicines can be raised, if they prove more effective than initially expected.³⁰

US health insurer UnitedHealthcare is also piloting a performance-based pricing experiment with Genomic Health, which makes a genetic test to identify which women with early-stage breast cancer would benefit from chemotherapy.³¹ And, by 2020, we think that all new medicines will be paid for on the basis of the outcomes they deliver.

However, most treatments perform much better in clinical trials than they do in everyday life, partly because the level of compliance is much higher. Numerous clinical studies show, for instance, that most patients who are taking statins can reduce their cholesterol to normal levels. But in one study of long-term compliance patterns, only 33% of patients were still using a statin at the end of 12 months, and only 13% were still doing so at the end of five years.³² Thus, if Pharma is to command premium prices for its products in future, it will need to help patients manage their health. Otherwise, it risks having to reduce its charges or even incurring financial penalties for failing to deliver all that it has promised.

To put it another way, good medicines will still be the cornerstone of any pharmaceutical company's marketing and sales strategy, but they will not be sufficient in isolation. By 2020, prescription therapies will be only one of the components in a collection of products and services from which patients can select. Furthermore, as the balance of power shifts from Pharma to healthcare payers and patients, the

definition of what constitutes a "good" medicine will expand. In addition to clinical considerations like safety and efficacy, it will include qualitative criteria – such as the extent to which a treatment makes patients feel better, enables them to keep working or reduces the cost of caring for them.

By 2020, we believe that pharmaceutical companies will therefore have to collaborate much more closely with everyone in the healthcare arena to provide a range of products and services from which patients can pick and choose all but the core prescription, both to differentiate their offerings more effectively and to preserve the value of the medicines they make. More specifically, they will have to:

- Recognise the interdependence of the pharmaceutical and healthcare value chains
- Ensure that they invest in developing medicines the market really wants
- Form a web of alliances to offer supporting services
- Develop comprehensive plans for marketing and selling specialist therapies
- Create organisational cultures that are suitable for marketing specialist healthcare packages
- Manage multi-country launches and live licensing
- Adopt a more flexible approach to pricing; and
- Build marketing and sales functions that are fit for the future.

Recognising the interdependence of the pharmaceutical and healthcare value chains

The relationship between pharmaceutical companies, healthcare payers and providers is at best wary – and sometimes downright antagonistic. Yet analysis of their value chains suggests that they have far more in common than might first seem the case.

In its simplest form, a value chain is the series of activities an entity (either singular or collective) performs to create value for its customers and thus for the entity itself. The pharmaceutical value chain starts with the raising of capital to fund R&D and concludes with the marketing and sale of the resulting products. In essence, it is about making innovative medicines that can command a premium price (see **Figure 3**).

The payer value chain starts with the raising of revenues through premiums, taxes or out-of-pocket payments. The payer then creates value for its customers (patients, policyholders and payers) by managing the administrative process and giving them access to medical care. The payer's goal is thus to make a financial or political profit by maximising its revenues or reputation (with its customers or voters, depending on whether it is a commercial enterprise or government) and the quality of the service it secures, while minimising its costs (see **Figure 4**).

The provider's goal is to deliver a high quality of care efficiently. This usually means treating patients as economically as possible, for as long as required. The provider value chain therefore begins with an analysis of the factors affecting

Figure 3: The pharmaceutical value chain



Source: PricewaterhouseCoopers

Figure 4: The healthcare payer value chain



Source: PricewaterhouseCoopers

Note: Our diagram represents the key activities in the payer value chain, not the entity that performs a specific activity, since this clearly varies from one healthcare system to another.

Figure 5: The healthcare provider value chain



Source: PricewaterhouseCoopers

Note: Our diagram represents the key activities in the provider value chain. Again, different entities perform different activities in different healthcare systems.

the health of a given population and the preventative measures that can be taken to forestall illness. Thereafter, it progresses through the various stages of treatment from primary care to long-term care (see **Figure 5**).

However, although these three value chains are different, they are also heavily interdependent. The value healthcare payers generate depends on the

policies and practices of the providers used. The value providers generate depends on the revenues payers raise and the medicines Pharma makes. And the value Pharma generates depends on getting access to the patients whom providers serve and income from the payers who fund those providers.

In short, none of the three parties can do its job properly without the others

and, while they continue to clash, they are struggling to attain their respective goals. The quality of the care they collectively deliver is lower, and the cost higher, than it would otherwise be – and society can no longer afford such inefficiencies. So, if mankind is to ensure that it gets the healthcare it needs, the three parties must be much more closely aligned.

We believe that creating feedback loops to capture outcomes data will help to close the gap. It will enable Pharma both to establish a more dynamic relationship with payers and providers, and to play a bigger role in giving patients the support they require. This will ultimately result in the convergence of the separate, linear value chains that exist today into a single, circular value chain (see **Figure 6**).

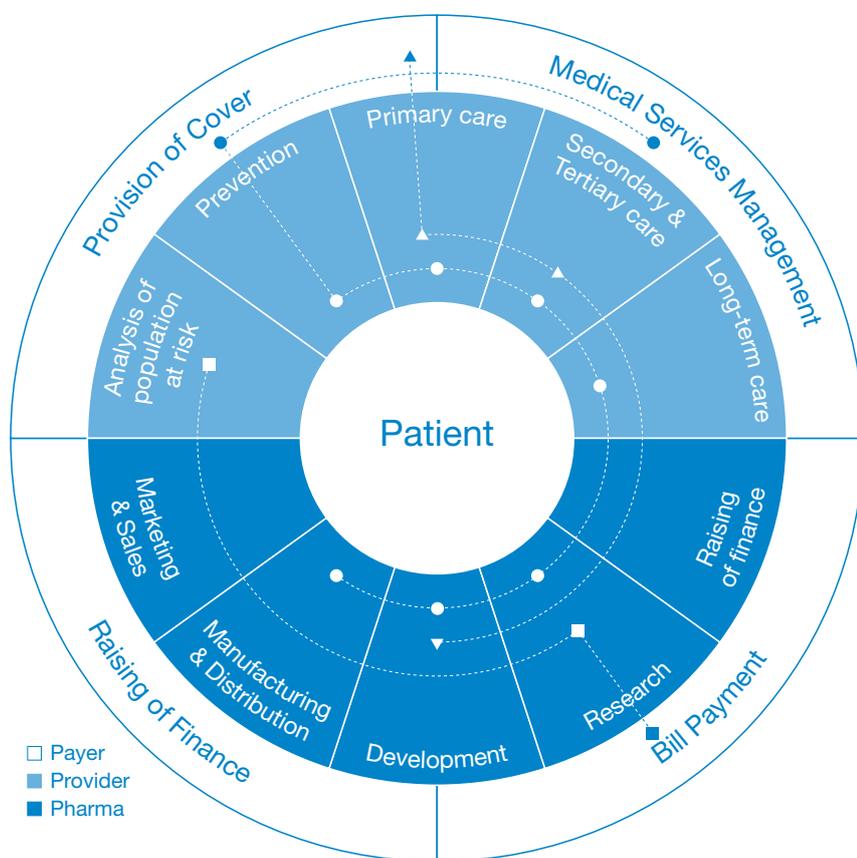
Investing in the development of medicines the market wants to buy

One of the many areas in which Pharma needs to work much more closely with healthcare payers and providers is in determining the sort of medicines the market actually wants to buy. We have identified seven stakeholders who each

play a key role in deciding whether a medicine is innovative, using different definitions of innovation at different points in the product lifecycle (see sidebar, **What is innovation?**).³³

The process starts with the *researcher*, who identifies the scientific potential of a particular molecule. It continues with the investor, who backs that belief with capital; the *regulator*, who approves the labelling claim; and the *pharmaceutical company*, which commits resources to

Figure 6: By 2020, the pharmaceutical, payer and provider value chains will be much more closely intertwined



Changes in epidemiology will influence the need for healthcare funding & Pharma's research priorities. Payers, providers & Pharma will collaborate on epidemiological studies.

Payers will shift to outcomes-based pricing. Pharma will collaborate with payers and providers to determine which of the medicines in its pipeline really add value and can thus command the premium prices it needs to maximise its return on investment.

Payers, in consultation with the medical profession, will issue clinical guidelines. They will also give providers incentives to prevent & manage disease, as distinct from treating it. Pharma's focus will shift to the development of cures and healthcare packages for helping patients comply with their medical regimens and manage the diseases from which they suffer more effectively.

the production and promotion of the treatment. Once a medicine has reached the market, it is the *healthcare payer, provider and patient*, respectively, who adjudicate on its innovativeness: the healthcare payer by paying a premium price for it; the provider by choosing it over other therapies; and the patient by taking it as instructed or even pressing for a prescription (see **Figure 7**).

However, not all of these “referees” are equally important. If the sponsoring company is to recover its development costs and earn a return on its investment, any new products it launches must command a premium price while they are still under patent protection. The healthcare payer – be it a government, health insurer, employer or patient – is therefore the ultimate arbiter of whether or not a product is considered innovative, and the shift in the balance of power from prescribers to payers will only increase that control.

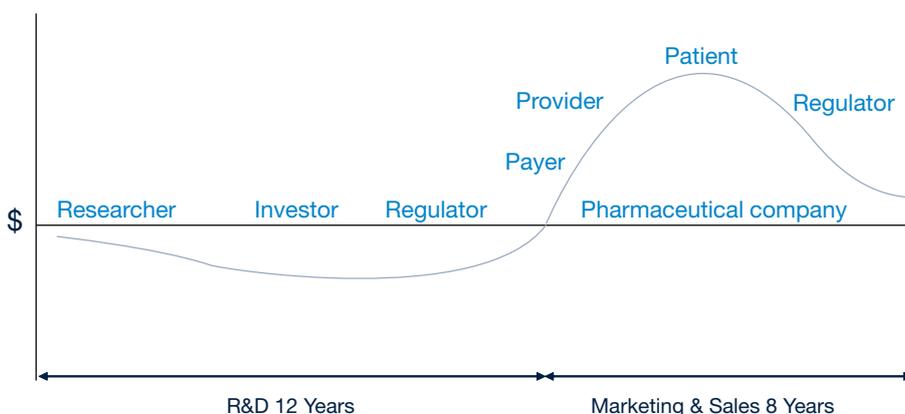
Yet, for many years, most pharmaceutical firms invested relatively little effort in understanding the payer’s perspective during the R&D process, and those that did so generally waited until the end. This is why many of the medicines they have recently launched have failed to qualify as innovative. In 2006, only five Big Pharma companies earned more than 10% of their revenues from major products launched within the previous five years.³⁴ Moreover, there are no signs of any immediate improvement. In 2007, only eight of the 27 new therapies launched worldwide were the first of their kind (see **Table 2**). More than half were “me-too” treatments with at least three predecessors.³⁵

A number of companies now look at whether the medicines they are developing are as effective as, or more effective than, other existing therapies (and certain countries now require that they do so). Some firms also

What is innovation?

Innovative products are typically defined as those which cure a disease or condition; prevent a disease or condition; reduce mortality or morbidity; reduce the cost of care; improve the quality of life; are safer or easier to use; or improve patient compliance and persistence. Most industry experts also distinguish between “radical” and “incremental” innovation, although the distinction is not always very helpful. Pharmaceutical companies often engage in a race to develop new products which all have the same mode of action, and the third or fourth market entrant may be superior to the first or second.

Figure 7: Seven stakeholders are involved in deciding whether a new product is innovative



Source: PricewaterhouseCoopers

Table 2: Only eight truly innovative medicines were launched in 2007

Company	Brand name	Primary indication	Country of first launch
Novartis	Tekturna	Hypertension	US
GlaxoSmithKline	Tykerb	Breast cancer	US
PharmaMar	Yondelis	Soft tissue sarcoma	UK, Germany
Alexion	Soliris	Paroxysmal nocturnal haemoglobinuria	US
Pfizer	Selzentri	HIV	US
GlaxoSmithKline	Altabax	Bacterial skin infections	US
LEO Pharma	ATryn	Thrombosis	UK
Bristol-Myers Squibb	Ixempra	Breast cancer	US

Sources: IMS Intelligence.360 (2008) and PricewaterhouseCoopers analysis

conduct extensive safety profiling in Phase II to reduce the risk of finding safety problems in Phase III, which accounts for more than 25% of all R&D costs.³⁶ However, very few focus on demonstrating the superior *economic* value of their candidate molecules – and even fewer consider pricing before the end of Phase III.

Two recent exceptions to this pattern point to a more constructive way forward. In late 2007, Novartis struck a groundbreaking deal with the English National Institute for Health and Clinical Excellence (NICE) under which it agreed to pay the agency a consultancy fee for advising it on the design of a Phase III trial to measure the efficacy and cost-effectiveness of an experimental new drug.³⁷ And, in June 2008, GlaxoSmithKline took the equally unprecedented step of giving government healthcare officials in the UK, France, Italy and Spain a say in deciding which compounds to progress through its pipeline.³⁸

We believe that all pharmaceutical companies should adopt a similar approach and extend the concept of “de-risking” from the clinical to

the commercial sphere. Indeed, they should review every compound in their pipelines, since no molecule that enters clinical development today will be launched before 2015, when the market for medicines will be even tougher than it is now. Performing a rigorous assessment of what payers, providers and patients regard as innovation in Phase II will enable the industry to terminate any candidates that look unlikely to generate much demand and concentrate its resources on more commercially promising products (see **Figure 8**).

Forming a web of alliances to offer supporting services

The development of medicines the market actually wants to buy will not be enough, though. By 2020, pharmaceutical companies will need to offer a suite of supporting services for the treatments they launch. A few companies have already paired up to develop complementary therapies and diagnostics, one of the best

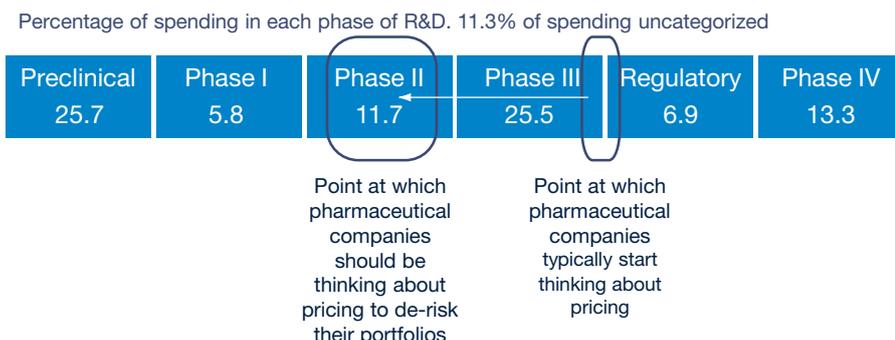
known examples being Genentech’s partnership with DAKO to devise a test for identifying which patients with breast cancer can benefit from Herceptin.³⁹

However, Pharma will also have to enter the health management space, with compliance programmes, nutritional advice, exercise facilities, health screening and other such services. One firm that has already gone some way down this road is Baxter Healthcare, which offers a range of services for patients suffering from renal failure. These services vary from country to country, but they include a global educational website with customisable tools and information tailored to the needs of paediatric patients; a network of nurses who provide dialysis training at home or in hospital; a home delivery service; and a travel service to support peritoneal dialysis patients travelling locally or globally.⁴⁰

Novo Nordisk has gone even further in its quest to “defeat diabetes”.⁴¹ In 2001, the company launched a global initiative called DAWN, in conjunction with the International Diabetes Federation, to provide “psychosocial support” for patients with diabetes.⁴² It also operates a “National Changing Diabetes” programme in 66 countries, via which it provides training for medical staff, free blood sugar screening services, support for diabetes patient organisations and equipment for diabetes clinics, as well as working with governments to improve the diagnosis and treatment of the disease.⁴³

Meanwhile, Medtronic recently launched a wireless monitoring service for patients with cardiac disease, which enables them to send data from their implanted devices directly to their

Figure 8: Pharma needs to adopt a price de-risking strategy in early development



Source: PricewaterhouseCoopers

doctors. The latest devices can even be programmed to update and send patient data automatically.⁴⁴ And other precedents for moving into health management exist outside Pharma itself. In the UK, for example, insurance giant Prudential has joined forces with Virgin Active Health Club to offer a critical illness policy that provides subsidised gym membership and rewards people who exercise regularly by reducing their premiums.⁴⁵

By 2020, this model will apply to the industry as a whole. Some companies may choose to provide such services themselves, but most will function as nodes for a network of providers, including device manufacturers, dieticians, health and fitness clubs, mobile telecoms operators and compliance call centres. They will be responsible for managing the mechanics of contracting and delivering these services, and thus collectively providing healthcare packages that individual patients can tailor to their own needs.

Moving into health management will not be easy, not least because the provision of services is very different from the provision of products. Nevertheless, this route has several significant advantages. It will enable pharmaceutical companies to generate new sources of revenue, build stronger brands and forge closer relationships with the patients who use their products and services. It will also help them to protect the value of the medicines they launch, both by increasing compliance and by reducing the threat of getting locked out through e-prescribing, since it is very much easier to substitute a standalone product than it is a product which comes with personalised satellite services.

Developing a plan for marketing and selling specialist therapies

The industry's changing product mix will act as yet another incentive to move into health management. In the 1990s, most of the medicines Pharma made were primary-care therapies for diseases afflicting large patient populations, such as hypertension, diabetes, high cholesterol and depression. But genomics, proteomics and metabolomics are providing new tools with which to develop larger molecules that more closely mimic naturally occurring molecules in the human body.

Biotech companies like Amgen, Biogen and Genentech were among the first firms to capitalise on these scientific advances. However, many pharmaceutical companies have now redirected much of their investment from chemical entities to proteins for specific cancers, immunological conditions and blood factor deficiencies too. At least 400 of the 2,000-odd treatments currently in development are biologicals or protein-based compounds.⁴⁶

Increasing generic competition has reinforced this shift in the industry's research focus; as many of the products developed in the 1990s come off patent, generics manufacturers are filling an ever larger part of the primary-care space. Generics already account for 65% of all prescriptions dispensed in the US and for as many as 70% of all prescriptions dispensed in Central and Eastern Europe,⁴⁷ a trend that will accelerate, as automated dispensing systems neutralise the effect of distributing free samples (see sidebar,

Generics for free

San Diego based MedVantx has developed an automated system for dispensing generics free at the point of care. When a doctor wants to give a patient a sample, the machine dispenses a 30-day supply and logs the transaction. The health insurer then pays for the product.

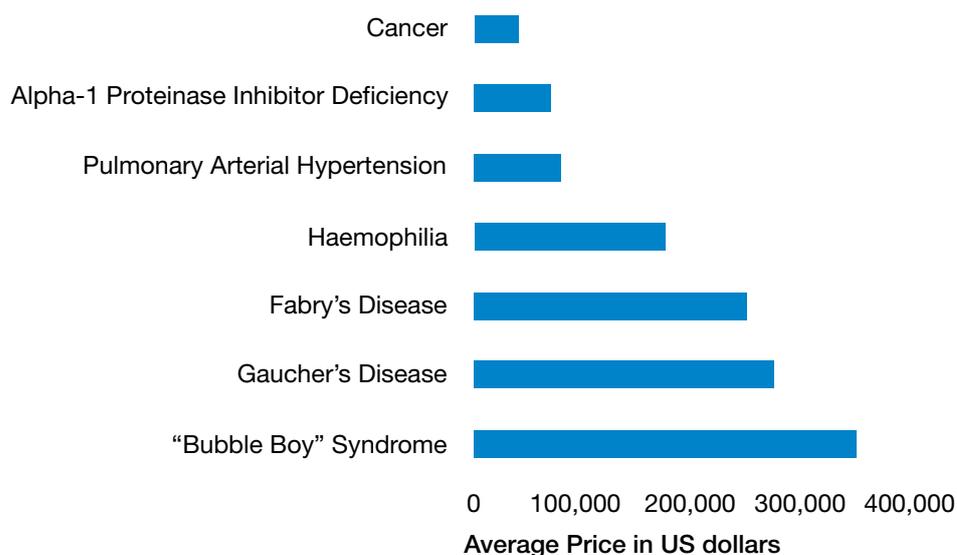
The idea is to give doctors an alternative to the free samples issued by pharmaceutical companies. Such samples are popular with patients because they provide an opportunity to try a medication before paying for it. One pilot programme conducted by Blue Cross & Blue Shield of Rhode Island is estimated to have reduced the insurer's expenditure on medicines by nearly \$2m.

Generics for free).⁴⁸ The opportunities for developing primary-care treatments with the potential to command premium prices are thus shrinking rapidly.

Conversely, demand for specialist medicines is soaring. In 2007, 55 of the 106 blockbusters on the market were specialist treatments, up from just 12 in 2001.⁴⁹ And IMS Health predicted that sales of all specialist therapies could reach US\$295-300 billion by the end of 2008, accounting for 44% of worldwide spending on prescription pharmaceuticals.⁵⁰

Yet, although specialist medicines hold huge clinical and commercial promise, they come with one major drawback: their charging profile. Tufts Center for the Study of Drug Development estimates that the cost of developing a new biological is about US\$1.2 billion, nearly US\$400m more than the average for a small molecule.⁵¹ But specialist

Figure 9: Many specialist therapies cost thousands, or even hundreds of thousands, of dollars a year



Source: D. Stevens, "Specialty Pharmacy to Therapy Management: The Next Generation", presented at PCMA Specialty Pharmacy Annual Meeting, October 2005

therapies are currently used to treat conditions that affect only 3% of the general population.⁵² A company that develops a specialist medicine must therefore amortise its investment (including the money it spends on marketing and sales) over a much smaller number of patients.

So it is not surprising that specialist therapies often sell for many thousands of dollars (see **Figure 9**). Nor is it surprising that healthcare payers everywhere are taking steps to slow down their utilisation. If demand for such products were to grow at current rates, the global market for specialist therapies alone would be worth about US\$1.4 trillion by 2020, double the US\$712 billion the entire prescription products market was worth in 2007.⁵³

The shift towards specialist therapies is thus accentuating the need to develop healthcare packages that have

value in the eyes of payers, providers and patients, not just those of the executives that have backed them. It is also increasing the importance of the marketing and selling process. But though most pharmaceutical firms have recognised the potential of specialist medicines, they continue to use a marketing and sales model that was designed to promote primary-care products for mass-market consumption.

In fact, specialist therapies have a number of unique features that differentiate them from conventional medicines and mean that they must be marketed quite differently. First, they typically have a broader range of activity and greater potential to generate an immune response. They are also prescribed by specialists rather than general practitioners. So anyone who is marketing such medicines must possess considerable scientific knowledge – both to understand the

benefits and risks associated with using them and to communicate with an audience that is very well informed.

Second, since specialist therapies cost such a lot, they attract far more scrutiny before being approved for reimbursement – and reimbursement is crucial, because few patients can afford to pay for them out of their own pockets. This trend will increase with the proliferation of more sophisticated pharmacoeconomic models, reducing the opportunities for "hype". It also means that anyone who promotes such medicines will need to have a clear grasp of the health economics underlying them.

Third, many specialist therapies are used to treat patients with specific disease subtypes, so they must be accompanied by a diagnostic. And since they are more difficult to get to the target site, they must generally be delivered by injection or infusion. Many such therapies must thus be administered by a doctor or nurse but, even when patients can administer their own medicines, they usually require intensive patient education and monitoring, especially in the early stages of treatment.

This not only adds to the overall cost of using specialist therapies, it also means that different payment centres (and reimbursement procedures) may be involved. In the US, for example, specialist treatments are often reimbursed under a healthcare payer's medical benefit rather than its pharmaceutical budget. Similarly, in the UK, the cost of monitoring and maintaining patients on specialist medicines frequently falls on the primary care trusts covering the areas in which those patients live, rather than the hospitals that treated them in the first place.

Lastly, many specialist treatments must be ordered as necessary, rather than kept in stock – partly because they are so expensive and partly because they have relatively short shelf lives. They must also be transported and stored with much greater care than small molecules, because they are much more fragile. Both these factors have considerable implications for the supply chain. The ability to “make to order” requires the integration of a company’s demand management with its manufacturing, packaging and distribution processes – changes that will necessitate a substantial capital investment in new skills and supply chain systems.

Any pharmaceutical company that wants to sell specialist therapies

will therefore have to develop a comprehensive marketing and sales strategy that is tailored to the distinctive characteristics of such products (see **Table 3**). It will have, among other things, to offer complementary diagnostics and support services; to appoint a smaller, smarter sales force capable of engaging with powerful healthcare payers and medical specialists; to build a responsive direct distribution network; and to invest much more effort in educating patients.

But if it succeeds in doing these things, it can expect to enjoy a longer period of exclusivity and greater customer loyalty, since biologicals are very difficult to manufacture and most patients are reluctant to switch from one to another because they are more

at risk of experiencing health problems. It can also, as we have already noted, generate additional revenues from the support services it provides.

Creating a culture that is suitable for marketing specialist healthcare packages

Selling specialist therapies and support services as distinct from standalone small molecules has numerous other implications, and any pharmaceutical company that wants to make the transition will need to undergo even more sweeping changes. It will, for

Table 3: Specialist therapies require different marketing and sales models from those used for mass-market medicines

Mass-market medicines	Specialist therapies	Marketing implications
Treat common illnesses	Treat rare diseases and specific disease subtypes	A much smaller target market Must generally be used with a diagnostic, which adds to the overall cost but improves compliance
Relatively simple products	Very complex products	Require more scientifically educated sales representatives
Typically prescribed by general practitioners	Prescribed by specialists	Require a much smaller sales force
Low price per dose	Very high price per treatment	Require much more extensive proof of clinical efficacy Outcomes-based pricing
Usually oral formulations	Usually delivered by infusion or injection	Require intensive patient education & monitoring Costs may be spread across different payment centres & budgets with different reimbursement procedures
Relatively easy to manufacture	Difficult to manufacture	Less vulnerable to generic competition
Easy to transport	Require special distribution & storage facilities	More expensive to ship & store
Generally kept in stock	Often delivered to order	Must be supported by a much more flexible supply chain

Source: PricewaterhouseCoopers

Playing by the rules

The majority of pharmaceutical companies have established compliance programmes that are based on the guidelines the Office of Inspector General of the US Department of Health and Human Services issued in April 2003. But they have typically taken quite a reactive approach. They have concentrated on mitigating legal risks, such as violations of the US Anti-Kickback Statute, US False Claims Act, US Foreign Corrupt Practices Act and various US state-level marketing disclosure reporting laws. They have also added yet another layer of controls to those they use in their existing business operations, rather than creating integrated, value-adding compliance functions.

example, have to decide whether to continue developing primary-care medications or focus exclusively on specialist therapies (as Genentech does). Similarly, it will have to decide what sort of business model it should use – be it diversified, federated or one of various other permutations.

Clearly, “hard” financial, operational and legal criteria will play a big role in shaping these choices but, whatever path they take, most companies will also have to make major cultural adaptations. They will have to build much closer links between their R&D and marketing and sales functions to foster cross-disciplinary collaboration and ensure that the views of healthcare payers are fed into the development process. One way of doing this is to create dual reporting relationships, with employees in R&D reporting to management in marketing and sales, and vice versa.

Many companies will likewise have to recruit and train people with new skills, including:

- Researchers who are as capable of considering commercial imperatives like pricing and sales as they are of considering scientific issues like safety and efficacy
- Manufacturing experts who can manage the complex processes required to produce large molecules and drug-device combinations that amalgamate different scientific disciplines
- Supply chain managers who can handle chilled-chain distribution through multiple channels and supervise a large network of service providers
- Health economists who can advise on the pricing and reimbursement of new medicines, and provide input into the design of clinical trials for candidate molecules
- Key account managers who can negotiate with increasingly powerful healthcare payers and pharmaco-economic assessment agencies; and
- Disease management specialists with a profound understanding of how to help patients through the disease lifecycle.

Finding people with the requisite skills will not be easy, given the breadth of knowledge the industry requires and the battle for brains now being waged in almost every part of the world. Many companies will therefore have to adopt new talent management strategies, as well as ensuring that the performance measures and incentive systems they use are aligned with the behaviour that will be needed to operate effectively in

a more integrated environment. Various elements may have to be altered, ranging from new cycle time targets for different steps in the R&D process to new measures of effectiveness in marketing and sales.

Most companies will also have to alter their corporate compliance programmes. At present, pharmaceutical compliance functions typically spend the bulk of their time and resources monitoring the way in which marketing and sales staff interact with healthcare professionals, and ensuring that everyone complies with the existing legislation (see sidebar, **Playing by the rules**).⁵⁴ But, as the industry shifts to specialist medicines, payers and patients play a bigger part in the purchasing process and a growing number of companies offer healthcare packages that include products and services supplied by other firms, so the compliance function’s responsibilities will increase. It will have to monitor communications with payers and patients; collect, analyse and report on information from third parties; and assume responsibility for managing a broader range of risks across the extended enterprise – all activities that will necessitate the acquisition of much better operational and information management skills.

In short, focusing on the development of specialist medicines and services rather than primary-care blockbusters entails making significant organisational and cultural changes – some of which may not be immediately obvious (see **Table 4**). And implementing these changes will take enormous effort.

Table 4: Specialist medicines require totally new organisational and cultural characteristics

	Blockbuster model	Specialist model
Strategy	Development of mass-market blockbusters	Development of specialist medicines for treating specific disease subtypes
	Generation of new prescriptions	Cooperation with healthcare payers & providers to optimise the healthcare resource mix Responsibility for compliance & persistence
Organisation	Vertically integrated	Networked
Culture	Fragmented, with separation of disciplines & brands	Integrated, with collaboration across disciplines & brands
R&D	Restricted research agenda	Comprehensive research agenda
	R&D silos	Internal & external connectivity, partnering & adaptive trials
	Cumbersome decision-making processes	Nimble decision-making processes
	Reward systems based on number rather than quality of candidate molecules	Reward systems based on collaboration & commercial awareness
Manufacturing	Narrow product range	Wide product range (including diagnostics, biomarkers & novel delivery technologies)
	Batch-based, “made to forecast” manufacturing	Flexible, “assembled to order” manufacturing
	Six Sigma processes	Unique manufacturing processes
Distribution	Traditional channels, primarily wholesalers	Multiple channels, including direct distribution to patients or their healthcare providers
	Conventional distribution	Chilled-chain distribution and storage
Pricing	What the market will bear, rebates & discounting	Pay-for-performance
Marketing & Sales	Intensive detailing	Individual negotiations with large healthcare payers; specialist advice for secondary & tertiary healthcare providers; & educational programmes for patients
	Based on differentiation of competing medicines	Based on treatment of specific disease states and measurement of outcomes

Source: PricewaterhouseCoopers

Managing multi-country launches and live licensing

The nature of the products and services Pharma offers is not all that will change over the next 11 years; so will the way in which they are regulated. The leading agencies are exploring various new methods for assessing, approving and monitoring medicines. We discussed these initiatives in detail in “Pharma 2020: Virtual R&D”, but they will also have a huge impact on the marketing and sales process.⁵⁵

We have predicted two changes that could prove particularly significant. First, by 2020, there may well be a common regulatory regime for all healthcare products and services, rather than separate regimes for pharmaceuticals, medical devices, diagnostics and the like (as is presently the case in most countries). Indeed, there may even be a single global system, administered by national or federal agencies responsible for ensuring that new treatments meet the needs of patients within their respective domains. We think the latter is unlikely, given the vested interests of the existing agencies, but there will almost certainly be much greater international harmonisation.

Second, the current “all-or-nothing” approach to the approval of new medicines may be replaced by a cumulative process, based on the gradual accretion of data. In other words, all newly approved therapies would receive “live licences” conditional on further in-life testing to substantiate their safety and efficacy in larger

populations, different populations or the treatment of other conditions.

If these changes take place, pharmaceutical companies will be able to launch new medicines and services simultaneously in multiple countries, although they will still have to deal with different regulators and market conditions. They will also be able to build new brands on an incremental basis, adding new services as they expand from one territory to another or identify new needs. But they will almost certainly be expected to price all new medicines on a sliding scale, with price rises tied to the extension of the live licence and quota of patients for which a treatment can be prescribed.

Clearly, managing multi-country launches with staged price increases would be a very complex business – and one that might well necessitate the acquisition of greater expertise in cross-jurisdictional regulation. But, with modern communications technologies, it would not be impossible. It would also have the great merit of enabling companies to start capitalising on their R&D expenditure much more rapidly, although sales would peak more slowly.

Adopting a much more flexible approach to pricing

In fact, Pharma will have to adopt a more flexible approach to pricing for other reasons as well. We have already discussed the forces driving the shift from fixed pricing to performance-based

pricing, as live outcomes data provide objective evidence of how new medicines perform outside a clinical setting. We think that differential pricing will also play a much bigger role in Pharma’s repertoire, as the emerging economies grow.

More than one-third of the world’s 10.1m high net worth individuals (defined as those with financial assets of at least US\$1m) live in Asia Pacific, Latin America and the Middle East – and the numbers are swelling rapidly. Between 2006 and 2007, the population of high net worth individuals in the BRIC economies (Brazil, Russia, India and China) rose by 19.4%, for example, compared with an increase of just 3.7% in Europe and 4.2% in the US.⁵⁶ Some of these people are rich enough to afford the most expensive medicines Pharma has to offer.

However, it is the rise of the global middle class – as distinct from the ranks of the wealthy – that is arguably more significant. US investment bank Goldman Sachs estimates that the number of people with annual incomes of between US\$6,000 and US\$30,000 (measured in purchasing power parity dollars) could increase by as much as two billion over the next 22 years.⁵⁷

Much of this explosive growth in the world’s prosperity will come from China and India (see sidebar, **Mass affluence will fuel Asia’s pharmaceutical markets**).⁵⁸ But the story extends considerably further; some 20m people from other countries are joining the global middle class every year, dwarfing previous periods of middle-class expansion, like the late 19th century in Europe and the US.⁵⁹

Pharma has traditionally been very cautious about using differential pricing, fearing that it encourages arbitrage between countries with higher and lower prices for the same medicines. But any organisation that wants to benefit from the increase in global affluence will have to tailor its products, services *and* prices to the needs of these new consumers – as several pharmaceutical companies have already recognised.

In March 2008, GlaxoSmithKline started offering its medicines at variable prices within, as well as between, middle-income countries. It is currently testing the strategy – which is designed to generate a premium from wealthier people in emerging economies without excluding those who cannot afford to pay – in India, Morocco and South Africa.⁶⁰ With this Big Pharma firm leading the way, we expect that others will soon follow.

Indeed, we predict that, by 2020, most pharmaceutical companies will use differential pricing, based on variations in income, to increase sales in developing countries. They will minimise the risk of parallel trading by branding and packaging the same medicines differently for rich and poor markets, and tracking them using e-tagging technologies.

Mass affluence will fuel Asia's pharmaceutical markets

China's burgeoning economy will lift hundreds of millions of households out of poverty during the next two decades. In 2005, about 148m Chinese urban households had annual incomes of less than 25,000 renminbi (US\$3,660 at current exchange rates and US\$7,379 in terms of purchasing power parity). By 2025, 263m households will earn over 40,000 renminbi a year – and 41m will have incomes of 100,000 renminbi or more. China's urban consumer market will then be worth about 20 trillion renminbi – almost as much as the entire Japanese consumer market is worth today.

Expenditure on private healthcare and medicines is expected to increase commensurately. Indeed, McKinsey estimates that private healthcare spending by urban Chinese consumers will grow at 11.6% a year for the next two decades, creating considerable opportunities for pharmaceutical companies and healthcare providers.

Affluence is also increasingly reshaping India's marketplace. Roughly 50m people currently have disposable incomes of between 200,000 and 1,000,000 rupees a year (the equivalent of between US\$4,572 and US\$22,872 at current exchange rates and between US\$11,870 and US\$59,400 in terms of purchasing power parity). But if the country continues to grow at its current rate, average household incomes will triple over the next two decades. By 2025, the middle class will number about 583m people – or 41% of the population – making India the world's fifth-largest consumer market.

Private consumption has already played a much larger role in India's growth than it has in that of other developing countries. This trend is projected to continue, especially in the healthcare sector. The market is currently worth just over \$34 billion. But, by 2025, an estimated 189m Indians will be at least 60 years of age – triple the number in 2004, thanks to greater affluence and better hygiene – and spending on private healthcare and medicines is forecast to grow at nearly 11% per annum until that point.

Creating a marketing and sales function that is fit for the future

All the changes we have discussed will have a major impact on the way in which pharmaceutical marketing and sales is conducted – and hence on the sort of marketing and sales functions companies require. Many of

the specialist medicines the industry develops will understandably be targeted at conditions that were previously unrecognised, because the knowledge required to distinguish between different disease subtypes did not exist. Pharma will therefore have to provide more support for the medical education programmes run by academic institutes to help doctors keep abreast of the latest medical developments.

Promoting bundled products

By 2020, patients will need healthcare packages that include branded medicines, generics and over-the-counter products – and they will not be concerned about which company makes which product, as long as it works for them. The development of “poly pills” will accelerate this trend. Scientists at the London-based Wolfson Institute of Preventive Medicine have, for example, recently developed a prototype “five-in-one” pill containing a statin, three hypertension treatments and folic acid, for patients suffering from cardiovascular disease. But the principle of “bundling” could equally easily be applied to other conditions, such as cancer – where a healthcare package might include an oncology agent for a specific disease subtype, treatment for cancer-induced anaemia, various pain killers, vitamins and so forth. Any pharmaceutical company that wants to create a comprehensive healthcare package for patients may therefore have to include medicines that are made by rival manufacturers in the products it sells.

The marketing process will also become much more incremental. In the past, the industry launched new products with big-budget campaigns. But, by 2020, new medicines will be launched with live licences. So they will have rapidly evolving labels, as the indications for which they can be prescribed are extended, new dosing schedules are developed and their side effects become more obvious. The “big bang” launch will thus be replaced by a process in which information is continuously disseminated in a series of much smaller waves.

Moreover, one of the principal tools pharmaceutical companies currently use to get access to doctors – the distribution of free samples – will be irrelevant in most cases. As we have already indicated, specialist medicines usually require refrigeration, must be administered by a healthcare professional and are much more expensive to produce than small molecules, characteristics that make sampling impractical and economically unfeasible. The product-service offerings the industry develops must therefore be both clinically and economically compelling, to ensure that it can reach the consultants who typically prescribe such treatments.

That, in turn, means it will have to build much stronger brands, a skill that lies

largely outside its experience to date. Many pharmaceutical companies treat the terms “product” and “brand” synonymously. But a brand is not a physical product; it is the set of associations a product or service engenders in the minds of its users. And the distinction is a critical one. Products have no long-term sustainability. They are eventually superseded by rival products with superior features or generic substitutes. Brands, by contrast, can be sustained indefinitely – and the potential for creating brands that physicians and patients value is very much greater with packages comprising different product-service combinations than it is with isolated products.

Most companies will thus have to change their marketing and sales functions quite substantially, as their focus switches to specialist medicines. Rather than hiring hundreds of thousands of sales representatives to knock on the doors of general practitioners, they will have to employ a small cadre of specialists who can negotiate with large healthcare payers and talk to highly qualified consultants on an equal footing (much as medical device manufacturers market their products to surgeons today). Clearly, the specific organisational model different companies adopt will depend

on their individual requirements. Nevertheless, we believe that several common elements will emerge, which we have depicted in **Figure 11** below.

First, the marketing and sales function will liaise much more closely with the R&D function both to help identify which molecules could produce medicines that have real value and to provide feedback on the uptake of products and services that are already on the market. It will also, of course, liaise with the health economics function on everything to do with pricing and reimbursement. This will assist the marketing and sales function in refining the strategies it uses to promote specific healthcare packages as they go through the live licensing process.

Second, brand management will play a

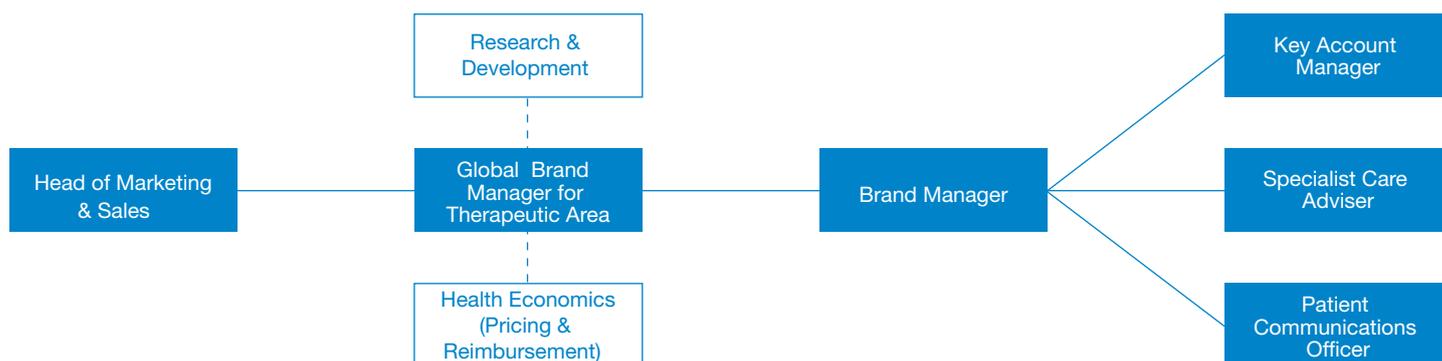
pivotal role. Many companies are likely to restructure their marketing functions accordingly, with the appointment of global or regional brand managers to decide which products and services different healthcare packages should include; supervise the launch of these packages; and maximise the returns they deliver (see sidebar, **Promoting bundled products**).⁶¹

Third, the day-to-day management of each brand will be divided into three core activities: key account management, specialist care support and patient communications. Key account managers will be responsible for maintaining the relationship with large healthcare payers and negotiating “big-ticket” sales; and specialist care advisers for promoting

specialist healthcare packages to secondary healthcare providers. Patient communications officers will be responsible for liaising with patient groups, developing educational literature, organising training programmes and answering queries (all permissible activities under the existing regulations, which do not preclude pharmaceutical companies from providing patients with information, as long as they do not give medical advice). A small primary-care sales force will supplement these tasks in any emerging countries where sales representatives still have a useful contribution to make.

However, the role and structure of the marketing and sales function are not all that must change. So must the way in

Figure 11: By 2020, the pharmaceutical marketing and sales function will be organised around brands



Source: PricewaterhouseCoopers

which it collects and uses information. Online patient forums, wikis and blogs are all valuable sources of data about what patients think. New web-based technologies have also stimulated the development of professional networking sites like Sermo, Healtheva and DoctorNetworking. Such sites provide insights that can help a company to differentiate its products and services more effectively, and identify new areas of demand.

Some of these sites likewise offer the industry an opportunity to engage rapidly and economically with a very large number of doctors. Pfizer recently took the first step in this direction, when it struck a deal with Sermo, under which it can read what doctors say on the site, as well as posting its own messages, provided that they are clearly marked with the company's logo and non-promotional in content.⁶² But many pharmaceutical companies have been slow to recognise the real potential of the Internet.

Most companies are also struggling to monitor and manage their sales activities. The vast majority have equipped their sales representatives with electronic territory management systems, but these systems frequently

do not interact with other critical systems, like accounting and resource planning. Moreover, a lot of sales people regard them as tools for monitoring how *they* perform, rather than as tools for helping a company manage its relations with its customers.⁶³

By 2020, this disjointed approach to the collection and sharing of data will not suffice. The pharmaceutical marketing and sales function of the future will need to collect both qualitative and quantitative information. It will need to collect that information from the other companies involved in delivering the healthcare packages it develops, as well as from patients, payers and providers. And it will need to share that information, both within and across corporate boundaries, in order to refine its service offerings, enhance the quality of the experience patients undergo and reinforce its brands (see **Figure 12**).

Conclusion

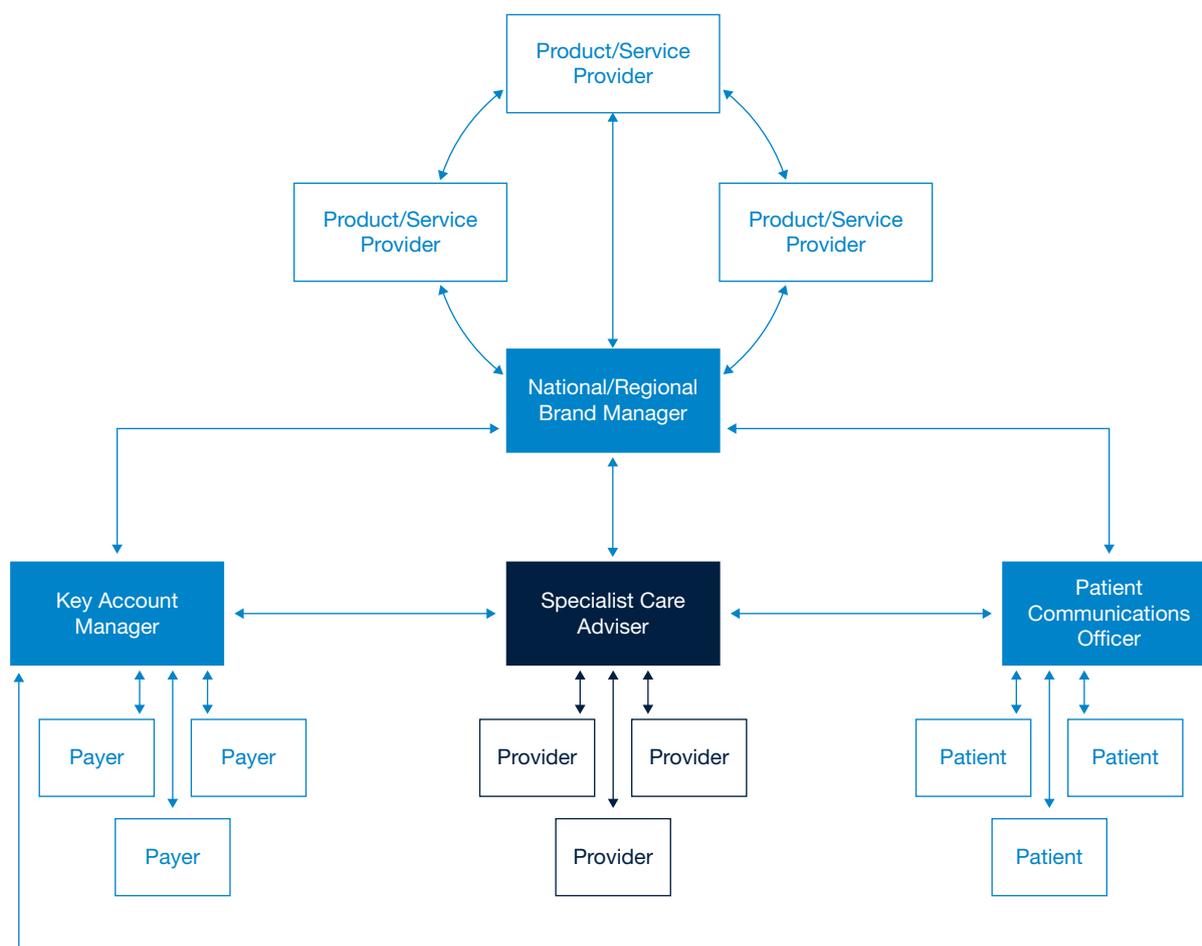
If Pharma is to create a new marketing and sales model that is fit for 2020, it will have to begin by analysing its own value chain to identify opportunities for working more closely with

healthcare payers and providers. It will, for example, have to collaborate much more closely with payers (be they governments, health insurers, employers or patients) to ensure that it develops medicines which have real social and economic value.

Moreover, the burden of proof will be much greater for specialist therapies costing many thousands of dollars than it is for primary-care treatments – and, as multiple products for treating specific disease states emerge, the pressure will only increase. Herceptin has long dominated the market for HER-2 positive breast cancer, for example, but with the launch of Tykerb, GlaxoSmithKline has produced a serious rival to the throne.⁶⁴

Pharma will have to supplement these new medicines with a wide range of health management services in order to improve compliance and protect the value of its products, as performance-based pricing becomes a prerequisite for reimbursement in its core markets. This will entail the formation of numerous alliances with local service providers and sometimes, perhaps, even rival manufacturers – alliances that are very much more sophisticated than the arm's length arrangements in which

Figure 12: The marketing and sales function of the future will need to be a learning organisation with fully integrated information flows



Source: PricewaterhouseCoopers

most companies currently engage. It will also entail the development of a secure, interoperable technological infrastructure, the management of new intellectual rights issues, the creation of much stronger brands and the redefinition of the industry's role. Instead of trying to stimulate prescription sales, its task will be to help patients manage the disease lifecycle.

The shift to performance-based pricing will dictate other changes, too, including the need for a more flexible approach to pricing. The introduction of live licensing and increasing importance of the emerging markets will reinforce this trend. Any company that launches a new healthcare package will have to negotiate price increases in line with the extension of the terms on which that package can be marketed. And if it wants to tap into the potential of the emerging world, it will have to use differential pricing – both within and between countries.

Many of the industry leaders will also have to develop comprehensive strategies for marketing and selling specialist healthcare packages, a process that will require major organisational and cultural changes, including the development of new skills and routes to market. One of the biggest decisions these companies face will be what sort of business model to use. Thanks to globalisation and connectivity, various new models are

emerging, both inside and outside the industry, and there is much that Pharma can learn from looking over the fence.

Lastly, most – if not all – pharmaceutical companies will have to transform their marketing and sales functions. By 2020, the role of the traditional sales representative will be largely obsolete. Conversely, the industry will have much greater need of people with the expertise to build brands; manage a network of external alliances; negotiate with governments and health insurers; liaise with secondary-care specialists; and communicate with patients.

These are enormous challenges. Yet if Pharma can overcome them, we believe that it will be able to slash its expenditure on marketing and sales. Consulting healthcare payers during the development process will put it in a much better position to ensure that the billions of dollars it invests in R&D are wisely spent, and eliminate the need to spend massive sums persuading increasingly sceptical doctors to prescribe medicines whose clinical superiority may be questionable. Focusing on specialist medicines will provide new commercial opportunities and reduce the risk of generic erosion. And creating healthcare packages for treating specific conditions will safeguard the value of good medicines, as well as providing new revenue streams and garnering greater loyalty from patients.

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