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PRESCRIPTION FOR GROWTH –
THE PHARMACEUTICAL INDUSTRY IN THE 21ST CENTURY



AS AMERICA ENTERED THE 20TH CENTURY,
THERE WERE FEW DRUGS IN THE NATION'S

IGNITE TALENT

MEDICINE CHEST. DOCTORS DID WHAT

THEY COULD TO MAKE PATIENTS FEEL BETTER, BUT

DISEASE WAS CLEARLY IN THE DRIVER'S SEAT. DISEASES

such as diphtheria and whooping cough sometimes claimed whole families, and pneumonia and influenza struck like lightning and spread like wildfire. The average age of Americans at death was 47.¹

As the world enters the 21st century, the pharmaceutical industry is adapting and equipping itself for a new set of formidable tasks. Globalization, consolidation, profit pressures, demographic changes, and unprotected market share are just some of the forces that will require a highly skilled, well-managed, competitive workforce to maintain profitability and sustain momentum. Sales within the United States by both U.S.-owned and foreign-owned research-

based companies accounted for \$105.6 billion of the 1999 total.² But the medicine chest is not growing in America alone. The current worldwide market for pharmaceuticals is estimated at \$265 billion, and could double or triple by 2002. With the majority of the world's population still under-served by pharmaceutical therapies, international sales will be a significant growth channel in the next century. Developing nations with rising living standards, especially Latin America, the Pacific Rim, and Eastern Europe, are accelerating their use of pharmaceuticals as the first line of medical sources of advantage. While these competitive market forces are likely to benefit

¹"Industry Profile 2000." PhRMA. Retrieved 7/31/00 from <http://www.phrma.org/publications/industry/profile00/>

²"Industry Profile 2000." PhRMA. Retrieved 7/31/00 from <http://www.phrma.org/publications/industry/profile00/>

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therapy. Globalization of the industry will continue to test old ways of doing business.

At the end of the 20th century, total health care became a cooperative venture among many participants—medical personnel, health-care facilities, insurance providers, managed care providers, health maintenance organizations, and patients—and the pharmaceutical industry played a key role. Statistics show that the domestic ethical drug industry employs more than 500,000 people worldwide doing research, sales, marketing, manufacturing, and distribution. The phenomenal and constant expansion of the industry has required corresponding growth and change in the employee base that is the foundation of that success. The increased complexity of the pharmaceutical sales process and the increased needs of the organization to outmaneuver the competition and win profitable business in an era of cost containment, heightened competition, and increased consumer awareness are all creating new challenges.

At the beginning of the 21st century, with the prospect for an even more turbulent future, the strongest pharmaceutical companies clearly recognize the need for enhancement of human capabilities. To maximize competitiveness, a number of major consolidations have occurred within the pharmaceutical industry, as well as many joint ventures and licensing agreements between companies. Pharmaceutical sales organizations are now actively recruiting and hiring to meet the needs in this environment. As employment expands, less experienced workers are being asked to assume leadership positions and to guide equally inexperienced new hires to productivity with speed and competence. Factors like these are causing a metamorphosis in the pharmaceutical marketplace of the new millennium, prompting smart companies to capitalize on the skills of their growing workforce to meet those challenges and win.

TODAY'S PHARMACEUTICAL INDUSTRY: FAST-ACTING FORMULAS

One of the fastest-growing industries in America, pharmaceutical producers' annual growth rate raced along at a double-digit rate for most of the 20th century. Then came an era of increasing government intervention and a massive reconfiguration of the health-insurance industry, and such levels of growth became less predictable. Now, direct-to-consumer business models have prompted pharmaceutical companies to launch new drugs with more frequency and with heightened marketing campaigns, especially as end-users become more involved in their own health care. In the past two decades, several strong trends have altered the landscape of pharmaceutical research and manufacture.

Significant changes in the industry include a growing and aging population and an ever-increasing standard for the practice of health care. Empowered by easy access to information, higher levels of education, and greater personal wealth, consumers want and demand a bigger say in their medical treatment. Such changes continue to transform the competitive landscape of the industry and consequently reduce the impact of traditional sources of advantage. While these competitive market forces are likely to benefit

consumers, pharmaceutical companies are challenged to increase the quantity, speed, and level of innovative products they produce while still maintaining a competitive advantage. In such an environment, competitive differentiation can disappear overnight. For pharmaceutical organizations to successfully execute strategy and in turn maintain a competitive advantage, they must be able to shift directions quickly and make certain that all employees understand their roles in strategy execution.

Demographics

Among the most consequential market drivers of the next few decades will be the “graying” of the population. The number of Americans over the age of 65 will grow 16 percent by 2010, and baby boomers will swell the 45–64 segment by 46 percent—from 54 to 80 million. Medicare patients use approximately three times as many prescriptions as those under 65, and the aged population consumes more than 75 percent of lifetime medical expenses in the last few months of life. Drugs are an efficient and cost-effective therapy relative to other types of medical care, such as surgical procedures, hospital stays, doctor visits, and nursing home admissions. Drug developers are already targeting the maladies of an aging populace. Remedies for hypertension, arthritis, Alzheimer’s disease, depression, hair loss, osteoporosis, and impotence are drawing much attention. Life expectancy has increased to an average of 76 years, and the increased demand and reliance on prescription drugs and medical nondurables by aging Americans will remain strong for some time. In fact, the sheer size of the aging population has produced fear that this “senior boom” could place a significant strain on our nation’s health-care resources, and the pharmaceutical industry will have to grow and adapt accordingly.

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Global Demands and Considerations

The current worldwide market for pharmaceuticals will double or triple by 2002. Most major research-based pharmaceutical companies are starting to aggressively market their products throughout the world, yet the majority of the world’s population remains untouched by pharmaceutical therapies. In fact, improving standards of living in Latin America, the Pacific Rim, and Eastern Europe imply that international sales will provide a major growth opportunity in the new millennium as countries begin utilizing pharmaceuticals as the first line of medical defense. Globalization will force pharmaceutical companies to react quickly to change, especially as specific local government market interventions practiced outside the United States cause companies to lower prices while research expenditures remain the same.

Regulatory Environment

A more positive development for the pharmaceutical business sector has been the industry-friendly change in approval processes by the U.S. Food & Drug Administration (FDA). Compounds are moving more quickly to market, due in part to R&D tax credits and the Prescription Drug User Fee Act (PDUFA). This legislation assesses the principal drug

makers an annual fee, which funds additional staff dedicated to fast-track approval at the FDA. The program brought in \$327 million during its first five years and was renewed in 1997 for another five years. The FDA approved 103 new products in 1997, with the fastest median approval time in history—14.4 months. However, the time is shrinking during which the first drug in a therapeutic class is the sole drug in that class—the profitability lifetime for drugs was greatly shortened in the 1980s due to the Hatch-Waxman Act of 1984, which allows quick approval of generic copies of brand-name drugs. As many companies face major losses in earnings growth as a result of mass patent expiration expected to occur in the next five years, it has become increasingly critical for pharmaceutical companies to create a sustainable pipeline. Research-based pharmaceutical companies invested 14.1 percent more in 1999 than they did in 1998, resulting in an R&D investment of \$24 billion.³

Mergers and Alliances

Since the mid-1980s—and most notably the last half of the 1990s—more than 25 major consolidations have occurred within the industry, offering economies of scale; synergies in manufacturing, marketing, and R&D; and a more formidable presence when dealing with large health care providers. Joint ventures and licensing agreements between “big pharma” companies and smaller biotechnology firms have helped bring products to market more quickly—always a vital concern in an industry faced with strict testing and regulations. Consolidations allow companies to achieve a large critical mass in R&D, combine new product pipelines and research capabilities, rapidly advance the state of scientific knowledge, enter new markets, and ensure a sufficient flow of new drugs to market. In addition to mergers and acquisitions, companies are increasingly turning to contract organizations to meet their outsourcing needs. The corporate style of these combining companies is often markedly different, offering further challenges for strategic alliance, team building, and human resource development. This is echoed in what Jon Symonds, chief financial officer of AstraZeneca, has to say: *“In the pharmaceutical industry you’ve got to be very careful. You can construct quite compelling mergers on the basis of financial parameters, looking at the value the merger will create. But, because the only thing you’ve got to be sure of in this industry is the ability to reinvent yourself every 10 years, you cannot translate that into numbers.”*⁴

Marketing and communications knowledge will be part of the skill set for pharmaceutical workers in every sector.

Direct-to-Consumer Business Model

More than ever before, consumers are taking control of their health. The increased access to information via the Internet, affinity groups, and direct-to-consumer (DTC) marketing has empowered consumers to become active partners with health-care providers, asking questions, evaluating information, and making choices. Pharmaceutical companies have slowly begun to develop relationship-marketing channels to reach consumers directly with information about diseases and therapies in an attempt to influence their decisions or begin dialogue about treatment options. DTC communications via television, newspaper, and magazine ads; Web pages; pamphlets; videos; and personalized mailings are growing. DTC advertising rose from less than \$200 million in 1994⁵ to more than \$1.2 billion in 1998⁶

³ “Industry Profile 1999.” PhRMA. Retrieved 11/30/99 from <http://www.phrma.org/publications/industry/profile99/>

⁴ “Corporate Governance and Cross-Border Mergers.” The Conference Board. 2000: 7.

⁵ “Direct-to-Consumer Advertising.” PhRMA. Retrieved 11/3/99 from <http://www.phrma.org/facts/bkgrndr/advert.html>

⁶ “Prescription drug ad spending in U.S. exceeds \$1.2 billion through November 1998.” IMS Health. February 9, 1999. Retrieved 12/15/99 from http://www.imshealth.com/html/news_arc/02_09_1999_145.htm

Removing pricing flexibility puts pressure on manufacturers to get prices right the first time, a difficult task for an industry that invests \$350 to \$500 million in each major drug that makes it to market.

as the pharmaceutical industry recognized the growing role played by consumers in the decision-making process. Marketing and communications knowledge will be part of the skill set for pharmaceutical workers in every sector.

Managed Care Organizations

Another major driver of change in the pharmaceutical industry in the last quarter century has been the rise of managed care organizations (MCOs). Today, health maintenance organizations (HMOs), preferred provider organizations (PPOs), or point-of-service plans cover 75 percent of employed Americans. This remodeling of the way consumer health services are dispensed has impacted those who provide pharmaceuticals in a number of ways:

- ↪ *Salesforces are addressing a new customer base as managed care and hospital administrators are replacing individual physicians as the primary decision makers.*
- ↪ *Formularies now control which drugs are approved for insurance coverage, based on therapeutic value, side effects, and cost. In 1997, 65 percent of HMOs planned to use closed formularies, limiting the number and variety of pharmaceutical preparations that are available to member patients. Competition for a place in the formularies is fierce.*
- ↪ *The large buying groups and networks represented by MCOs have kept drug prices steady and have slowed previously dependable double-digit markups. Few new products can afford to emerge at a premium price for fear of automatic exclusion from formularies. Removing pricing flexibility puts pressure on manufacturers to get prices right the first time, a difficult task for an industry that invests \$350 to \$500 million in each major drug that makes it to market. Efficiencies in research and development are desirable to control costs at the front end.*

Cost Containment

Analysts project that over the next five years, earnings will grow roughly 13 percent on average for the top pharmaceutical companies.⁷ This growth projection is due in part to margin enhancing cost reductions. Companies are focusing on improving business efficiencies, product approval timelines, productivity, inventory management, life-cycle management, and cycle time. They are also working with formulary agents to demonstrate the value and cost-effectiveness of specific medicines or therapies to patients, payers, and providers.

Generic and Counterfeit Drugs

The primary driver of sales growth for the industry is product innovation. This is not an easy undertaking considering that only 1 in 5000 compounds discovered ever make it to the pharmacy shelf and the average shelf life for drugs that do make it is only 10–12 years. Generic drug compounds and alternative medicines from herbal preparations continue to

⁷ Goldsbrough, Lawyer, Sondhi. (Eds.) "The pharmaceutical industry into its second century: From serendipity to strategy." 1999: pp. 38. The Boston Consulting Group.

erode the market share for branded pharmaceuticals. Upon expiration of their patents, originator drugs become available in generic form at 50–90 percent less than the cost of the brand name—generics can erode up to 80 percent of a branded drug’s business within a year of patent expiration. Manufacturers of generic drugs have the strategic advantage of shorter product cycles and lower overall costs in a commodity business with low barriers to entry. With many key patents expiring in the next five to seven years, large pharmaceutical companies are responding to this encroachment by buying or allying with both generic and herbal drug producers.

THE PEOPLE BEHIND THE PILL BOXES

Research and development are the lifeblood of the pharmaceutical industry, but the new hyper-competitive environment requires the pharmaceutical salesforce to serve a much more sophisticated role than simply a provider of product facts. With an expected 8–10 percent growth rate for the next several years and profit targets of 12–14 percent, drug makers need a continuous flow of innovative products—and of qualified people to make it happen.

The best leaders create a “performance culture,” setting high standards while creating an atmosphere where scientists are comfortable taking risks.

A recent Andersen Consulting study observed that “most pharmaceutical companies will have to achieve a higher performance level merely to maintain their current revenue and growth trajectories.” Unfortunately, Andersen claims current R&D operating models are not capable of delivering the required number and quality of drugs to accomplish these goals. The study found that “new thinking is required to embrace discovery strategies, systematic processes, leading-edge technologies, tailored organizational approaches, and more robust management capabilities.”⁸ Frequent changes in leadership, unclear direction, and poor communication—all symptoms of fallout from merger mania—have led to low morale and confusion. The best leaders create a “performance culture,” setting high standards while creating an atmosphere where scientists are comfortable taking risks. Traditional pharmaceutical companies need to create an environment that fosters innovation in order to attract researchers away from biotechnology firms. Finding enough skilled workers is the initial challenge, followed closely by effective training, continuous reinforcement and development, and retention. Team building, the flexibility to learn new skills, and having a business-oriented mindset will also be vital to achieve R&D goals. Applicants with technical or clinical backgrounds will need some sales and marketing skills, as collaboration among departments or divisions increases in importance. Positions in every level of the organization will require proficiency in information technology, which means more technical training per capita.

Pharmaceutical sales organizations are actively recruiting and hiring after years of downsizing and reductions-in-force. Consequently, many less experienced salespeople and managers are joining the ranks of the sales and research departments. In order to understand how competitive pressures are affecting pharmaceutical sales representatives, Wilson Learning’s research group conducted a survey of industry training and development directors

⁸ Marketletter, 11/24/97.

and managers.⁹ The survey focused on the influence of changes in the marketplace and on how pharmaceutical companies think about their customers, their salesforce, and traditional sources of advantage. The study found that the industry was experiencing a loss of its long-established sources of competitive advantage, and that the skills of salespeople had become a primary source of differentiation. Cost has impact, but is not a major differentiator. It confirmed that drug sales reps are addressing new buyers, and 38 percent of respondents indicated their salespeople were minimally or not at all prepared for this new sales environment. Of the remainder, 62 percent felt somewhat prepared, and no one felt well prepared. Some of the keywords for development initiatives that surfaced in the study were innovation, leadership, performance culture, growth, and teams. On the training horizon for participants in this study were programs to:

- ↯ *Attract and keep the best scientists.*
- ↯ *Diagnose the human capabilities required to achieve rapid growth targets.*
- ↯ *Develop flexible processes in resource allocation.*
- ↯ *Maximize innovation.*
- ↯ *Promote a highly collaborative culture.*

Ongoing conversations with pharmaceutical organizations continue to confirm the belief that people have become a primary differentiator for an industry in constant transition. Locating, competing for, selecting, training, motivating, and developing quality employees is “building competitive immunity.”

In the spring of 1998, Wilson Learning surveyed another sample of international pharmaceutical industry professionals about how training might fortify and enrich their workforce for the challenges of today and tomorrow. Twenty-six percent of the respondents—representing the human resources, training, organizational development, or research operations of larger drug manufacturing firms—identified executive and management development as their greatest need in the year ahead. As employment expands in the pharmaceutical industry, less experienced, untrained workers are being pushed into leadership roles and asked to move new hires up to speed quickly. Sales training was ranked as a second critical need, with frequent mention of the higher level skills required for interaction with physicians, pharmacists, and MCO professionals. Team building, communication, and decision making were necessary skills for workers in all areas.

Survey participants also expressed a need for training materials that are targeted at their industry. An understanding of the challenges that drug companies face at the turn of the century positions a curriculum or learning technology for more rapid impact. Case studies with industry context and terminology build immediate relevance. Wilson Learning’s ongoing conversations with pharmaceutical organizations continue to confirm the belief that people have become a primary differentiator for an industry in constant transition. Locating, competing for, selecting, training, motivating, and developing quality employees

⁹ Leimbach, Michael, Ph.D. *Pharmaceutical Salespeople: Serving as a Source of Competitive Advantage*, Wilson Learning Corporation, 1995

is, in the words of one international contact, “building competitive immunity.”

LOOKING TOWARD THE FUTURE

The pharmaceutical industry in the United States has enjoyed a century of phenomenal contribution to society and has reaped the benefits of unparalleled growth. As the 21st century begins, the industry is adapting and equipping itself for another century of breakthrough innovation and profitable growth. Environmental forces including globalization, mergers and alliances, increased speed to market, consumer awareness, and cutting-edge research and development will require the best pharmaceutical companies to adapt quickly while building a well-equipped, competitive workforce. Professional training, provided by internal and external specialists and innovative technologies, can contribute greatly to achieving business goals in challenging times.

Anticipated and strategic changes in the pharmaceutical business in response to industry trends necessitate corresponding changes in the work activities and competencies of their valued employees. These changes will require increased levels of ability, action, and knowledge. Though the following commentary by business analysts A.T. Kearney & Co. puts the challenges for pharmaceutical sales and research competitiveness into a macroeconomic context, it also speaks to the individual competencies of the people who form the industry: *“Linking pharmaceutical company core capabilities to economic return offers companies the opportunity to determine the best areas for achieving superior competitive performance. While in the long term, increased research and development effectiveness will continue to have a strong impact on economic return, the major short-term opportunities for increased economic return lie in improving sales and marketing and operational excellence. In fact, if pharmaceutical companies seized every opportunity for improvement in their core capabilities, and if all these improvements were reflected in company market valuations, they could theoretically double market capitalization—an increase of more than \$27 billion for the average company.”*¹⁰

This paper draws from three separate research initiatives that Wilson Learning has undertaken over the past several years. Wilson Learning’s Pharmaceutical Performance Group presented these findings at the 2000 Annual Convention of the National Society for Pharmaceutical Sales Trainers.¹¹ Wilson Learning has also identified the core competencies that are common across sales and sales manager positions to help pharmaceutical organizations determine the best areas for performance improvement. If you would like more information on these competencies, or on the more general business issues discussed in this paper, please contact your Wilson Learning representative at 1.800.328.7937.

¹⁰ Leimbach, Michael, Ph.D. *Pharmaceutical Salespeople: Serving as a Source of Competitive Advantage*, Wilson Learning Corporation, 1995.

¹¹ The organization has since changed its name and is now the Society for Pharmaceutical and Biotech Trainers.



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WLC 39490 7/01 Version 10.0

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