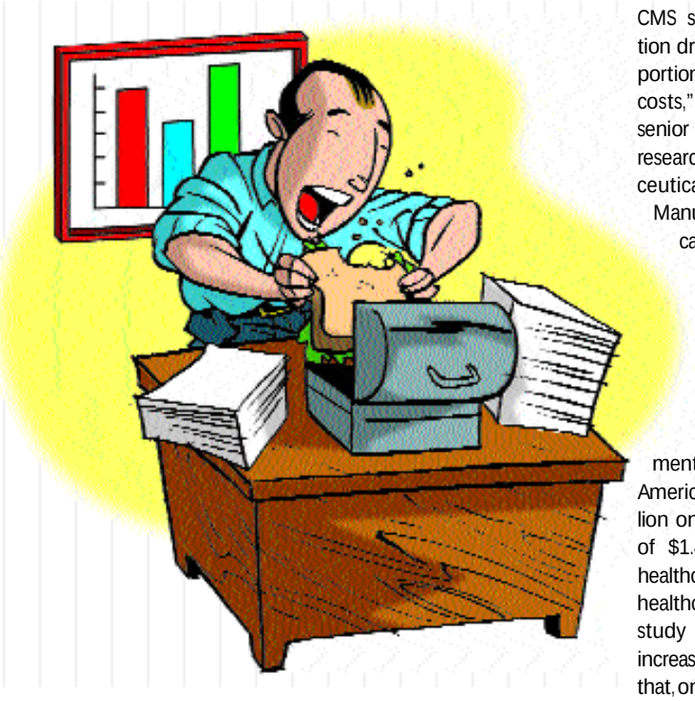


Government and Consumer Studies CONFIRM VALUE OF DTC ADVERTISING

A Center for Medicare and Medicaid Services study shows that prescription drug costs account for only 10 cents of the nation's total healthcare dollar. Other healthcare goods and services accounted for nearly five times the increase in healthcare costs as prescription drugs.

"We're still seeing unsubstantiated claims that drugs are making healthcare unaffordable, but my son's 7th grade math class would conclude from the CMS study that prescription drugs are a very small portion of total healthcare costs," says Rick Smith, senior VP for policy and research at The Pharmaceutical Research and Manufacturers of America (PhRMA). "It's basic addition, subtraction, and division. Prescription drugs are only 10 cents of the overall healthcare dollar."

"It's basic addition, subtraction, and division. Prescription drugs are only 10 cents of the overall healthcare dollar, and it is ludicrous to suggest that they're responsible for most of the $115 billion increase in healthcare costs," Rick Smith says.

The new government study shows that Americans spent $141 billion on drugs in 2001, out of $1.424 trillion on all healthcare — 9.9% of all healthcare spending. The study also shows that healthcare spending increased by $115 billion between 2000 and 2001. Of that, only $19 billion was accounted for by drugs — 16.6% of the overall increase in healthcare costs.

PhRMA also has highlighted the results from two studies measuring the impact of direct-to-consumer (DTC) advertising on doctors and consumers. Preliminary findings of a FDA survey confirm that physicians consider DTC advertising to have a "positive public health function."

In addition, a recent National Consumer League survey found that DTC advertising led consumers to seek more information, raised awareness about their medical conditions or available treatments, and led them to visit their doctor to discuss diseases that might otherwise go undiagnosed.

"Critics attack such ads for provoking patients to ask their doctors for expensive drugs for which they may not have a medical need," says Linda Golodner, National Consumer League president. "But if these ads are encouraging dialogue of any nature between doctors and their patients, this can hardly be a bad thing."

PATIENT SURVEY ON DTC

- More than half of adults who saw a DTC ad were **MOTIVATED TO TAKE ACTION** and of those, most were interested in finding out if the medication could help themselves or a family member.
- Of adults who talked to or visited their doctor, few (9%) had already decided they wanted the medication, although 51% wanted to **FIND OUT IF IT WAS RIGHT FOR THEM**. Most of the remaining wanted to find out the best way to treat their condition.

Source: National Consumer League Survey, January 9, 2003

PHYSICIAN SURVEY ON DTC

- Overall, physicians reported that DTC advertising **INCREASED PATIENT AWARENESS** of possible treatments, involvement in their healthcare, compliance, and doctor-patient interaction.
- Doctors believe that **PATIENTS UNDERSTAND** they need to consult a healthcare professional about appropriate treatment: 82% of physicians believe patients understand very well or somewhat that only a doctor can decide if the drug is right for the patient.
- Of the 59% of doctors who recalled being asked for a specific brand-name product, **ONLY HALF PRESCRIBED THE DRUG**. And 88% of the time patients asked about a drug by name, they had the condition the drug treats.

Source: FDA Doctors Survey, January 13, 2003

Market for ALTERNATIVE DRUG DELIVERY SYSTEMS Will Reach $66 Billion by 2007

Advanced technologies that improve safety and provide more cost-effective treatment options are expected to propel growth for the alternative drug delivery systems (ADDS) market. Front Line Strategic Consulting Inc.'s report, Alternative Drug Delivery Systems: A Strategic Market Assessment, projects the worldwide ADDS market will experience a 10% overall compound annual growth rate. Oral controlled-release products are the largest market segment with a 53% market share in 2002. The U.S. market share is at 56%, Europe has 29% of the market, and Japan has 9%.

"Trends in the ADDS market will influence the strategies of both existing companies and new companies that emerge over the next five years," Molly Varnau says.

"Trends in the ADDS market will influence the strategies of both existing companies and new companies over the next five years," says Molly Varnau, director of strategic market reports for Front Line Strategic Consulting Inc. "New options will increase drug therapy revenue and extend patent life of certain therapies. The change in aging demographics will drive the demand for drugs that are often best administered via ADDS, such as drug treatments requiring a controlled administration rate over time."

The factors driving the development of ADDS include patient and healthcare provider interests, drug company interests, and new market opportunities.

Several factors are expected to cause the ADDS category to expand during the next five years. They include traditionally administered drug delivery limitations that are eliminated by ADDS, such as gastrointestinal digestion, which allows for slow, sustained drug release.

Certain reduction of side effects are attained because lower dosages are required to reach drug effectiveness; ADDS also act locally, reducing the amount of drug diffused through the body.

AMERICANS HAVE FEW CONCERNS About How Pharmaceutical Companies Market to Doctors

A *Wall Street Journal* Online/Harris Interactive Healthcare Poll shows that 67% of adult Americans trust their doctors to choose the best drugs for them, despite the influence that drug marketers may have on their decision-making. The poll was conducted online among a nationwide cross section of 4,173 adults.

"In general, patients think their doctors make good judgments about when to believe or not to believe the drug companies," says Humphrey Taylor, chairman of The Harris Poll from Harris Interactive. "The public does not believe that their physicians are manipulated by the pharmaceutical industry."

AMERICANS TRUST THEIR PHYSICIANS

- **67%** of those surveyed say they trust their doctors to decide on the best drugs to use, **23%** of those surveyed said their doctor may be too influenced by the industry's marketing efforts
- **25%** said they think pharmaceutical companies are much too aggressive, **30%** said they are a little too aggressive in their marketing of drugs to doctors, and **26%** of respondents believe drug marketing by pharmaceutical companies is acceptable and reasonable
- **64%** of respondents believe that doctors should decide for themselves whether or not to meet with pharmaceutical companies to learn of the benefits of their drugs, **21%** prefer their doctors to meet with them; and **8%** prefer their doctors not meet with drug marketers
- **72%** said pharmaceutical companies should be allowed to sponsor continuing education programs that are designed to help them describe the benefits of their drugs, **11%** said they should not be allowed, and **18%** were not sure

MARKETING SPEND TO INCREASE For New Wave of Blockbusters

The next generation of pharmaceutical blockbusters will be backed by intense marketing spending and experienced staffs in 2003, according to a recent study by Cutting Edge Information, a research firm in Durham, N.C. High-impact products will spend upward of $200 million for marketing activities — and top pharmaceutical companies are expected to ramp up activities as a launch nears, expanding commercialization budgets by an average of 34%.

"There are many potential blockbusters sitting in pharmaceutical pipelines right now," says Cutting Edge Information's President Jason Richardson.

"The companies we've studied have been successful launching blockbusters because they understand how and when to spend their marketing dollars."

Blockbuster drugs require several hundred million dollars in marketing budgets. Brand teams spend 46% of their total budgets during a product's launch, and some companies increase brand team staffing by 100%.

Cutting Edge analysts say a host of new blockbuster hopefuls is expected to propel pharmaceutical companies to double-digit potential earnings growth.

Companies Plan to Implement Technologies to IMPROVE REGULATORY PROCESSES

CDC Solutions Ltd.'s Regulatory Submissions Trends Survey 2002, has found that life-science companies of all kinds plan to increase their use of regulations submission software. While only 7% of global regulatory departments currently are using a purely electronic submissions system, nearly 60% of respondents plan to increase their use of such software.

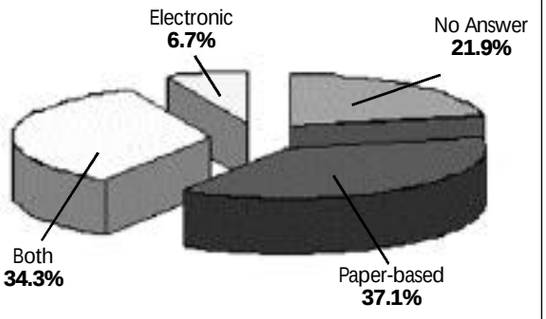
Within the next 12 months, 19% of survey respondents say they plan to move to a full electronic system in 2003, while an additional 34% say they plan to make the change in more than 12 months.

More than half of respondents (58%) anticipate their use of regulatory submissions software will increase, and survey respondents identified process improvement and compliance with 21 CFR Part 11, the regulations that address electronic submissions of new drug applications, as the greatest benefits to using regulatory publishing software.

Nearly 50% of respondents anticipate that their use of outsource vendors as a whole will increase or stay the same over the next year. The majority of respondents indicate they are either compliant with 21 CFR Part 11 or are planning to become compliant.

But to become compliant, respondents believe it will impact their company's people, processes, and technologies.

WHAT KIND OF SYSTEM DO YOU USE FOR SUBMISSIONS?



Source: CDC Solutions

CDC SOLUTIONS REPORT FINDINGS

TECHNOLOGY USAGE

- **37%** of respondents currently are using a paper-based system for submissions, **34%** are using a combination of paper and electronic means
- **ALMOST 60%** plan to increase their use of regulatory submissions software

When asked what they see as the benefit to regulatory publishing software, process improvement **(39%)** and compliance with 21 CFR Part 11 **(34%)** were most often noted

- **MORE THAN 40%** are using a document management system, and the majority of those **(60%)** indicated that they use Documentum as their DMS solution

OUTSOURCING TRENDS

Of the survey respondents, **14%** currently use outsource vendors for submissions, yet one-fourth **(25%)** say they do not use outsource vendors

Clinical research topped the list of areas that are outsourced **(35%)**

- **ALMOST 50%** of respondents say their use of outsource vendors as a whole will increase or stay the same

REGULATORY TRENDS

The majority of respondents indicate they are either compliant with 21 CFR Part 11 **(11%)** or are planning to become compliant **(42%)**

To become compliant, respondents believe it will impact their company's people **(37%)** , processes **(43%)** , and technologies **(42%)**

Companies were asked about their plans to migrate the submission process to the eCTD: **20%** of respondents said they are uncertain, **12%** said they do not, and **35%** said they do have plans to migrate to eCTD

- **MORE THAN ONE THIRD(34%)** believe the eCTD will require a longer term change in their submissions processes (within the next 18 months)

INDUSTRY SNAPSHOT

FDA Approves 89 New Medicines in 2002

In 2002, the Food and Drug Administration (FDA) granted approval for 89 new medicines, including 17 new molecular entities and 9 new biologics. An additional 172 new indications for previously approved medicines also were approved by the FDA.

"The new treatments added to the nation's medicine chest this year will save lives and improve the quality of life for individuals suffering from diseases with a terrible human cost to patients and their families," says Alan F. Holmer, president of The Pharmaceutical Research and Manufacturers of America (PhRMA).

In addition, according to the FDA, the number of potential medicines entering clinical trials was 15% higher in 2001 (the latest available year for which these numbers are available) than the previous five years. The total number of clinical trials of new medicines increased by more than 1,000 in the past 15 years.

Despite the increase in approved drugs, the FDA has announced a broad initiative to help make innovative medical technologies available sooner and to reduce the costs of developing those products. This FDA-wide initiative involves all four of the FDA's medical product review centers: drugs, biologics, devices, and veterinary medicine.

In 2002, there were fewer marketing applications and longer total approval times in some significant product areas. Approval times increased for priority new molecular entities for drugs and for some biologic applications and decreased for some standard drug and biologic applications and for significant new animal drug applications.

"We noted a decline in product applications in some key areas, which contributed to an increase in average and median review times," says FDA Commissioner Mark B. McClellan, M.D., Ph.D. "There is some evidence that this finding is a result of technology development becoming more costly and reorienting to new areas as a result of breakthroughs in basic research. These results call for decisive action now, so that the trends of the future are not toward fewer products with higher development costs."

The agency plans, when possible, to avoid multiple cycles of FDA review through early communication and other steps. Also planned is the adoption of a quality systems approach to medical product reviews. In addition, the FDA will clarify the regulatory pathways — pathways expected to cut across the FDA's product centers — in three emerging areas of technology: cell and gene therapy, pharmacogenomics, and novel drug-delivery systems.

NEW MEDICINES AND INDICATIONS APPROVED BY THE FDA IN 2002 INCLUDE:

- Four new medicines for **HEART DISEASE**.
- Five new medicines for **CANCER**.
- Three new medicines to **TREAT INFECTIOUS DISEASES** — one for hepatitis C, one for hepatitis B, and one for deadly fungal infections that attack people with weakened immune systems.
- A new medicine for patients with **CHRONIC RENAL FAILURE** to increase removal of fluid from the bloodstream during dialysis.
- A medicine that relieves the debilitating symptoms of **MIGRAINE HEADACHES**.
- A new once-daily tablet that relieves the symptoms of **SCHIZOPHRENIA** with few side effects.
- A new monoclonal antibody that blocks a protein responsible for the inflammation of **RHEUMATOID ARTHRITIS**.
- A new medicine that decreases the frequency of attacks in **MULTIPLE SCLEROSIS**.
- Four new medicines for diseases that affect children plus two vaccines to prevent **CHILDHOOD DISEASES**.
- A new medicine for **IRRITABLE BOWEL SYNDROME**.
- A new **IMAGING AGENT** to help in the diagnosis of heart disease.
- A new medicine for **CATAPLEXY**, a neurological disorder associated with narcolepsy.
- A new drug for an **INHERITED PROTEIN DEFICIENCY** that leads to emphysema.
- The first in a new class of drugs called **BONE-FORMATION AGENTS** was approved for the treatment of osteoporosis.
- A once-daily capsule for the treatment of **CHRONIC, MODERATE-TO-SEVERE PAIN** in patients who require continuous therapy.
- A new treatment for **MAJOR DEPRESSIVE DISORDER**.
- A medicine previously approved for chronic myeloid leukemia was approved to treat **GASTROINTESTINAL STROMAL TUMOR**.
- A medicine previously approved for osteoarthritis and pain was approved for **RHEUMATOID ARTHRITIS**.
- A medicine previously approved for schizophrenia was approved to **REDUCE THE RISK OF SUICIDAL BEHAVIOR** in patients with schizophrenia.

Source: U.S. Food and Drug Administration

SERIOUS SHORT-FALL IN BIOTECH MANUFACTURING Capacity Expected

The biotechnology industry's rapid growth rate has affected the bioprocessing industry, according to a recent report by Drug & Market Development Publications. The growth of the biotechnology industry has been paralleled by the growth of the bioprocessing industry. The pressure to increase efficiency, reduce production costs, and speed time to market is being met with contract manufacturer expansions, more efficient expression systems, and downstream processing.

"Current projections, based particularly upon the number of monoclonal antibody products currently in the clinical-trial pipeline, point to a serious shortfall developing within three years in manufacturing capacity," says Alex D. Kanarek, Ph.D.

Drug & Market Development's report, The Bioprocessing Industry, says the worldwide contract manufacturing market for biopharmaceuticals was valued at $780 million in 1998. By 2000, it was projected to exceed $1.1 billion.

"Current projections, based particularly upon the number of monoclonal antibody products in the pipeline, point to a serious shortfall developing within three years, especially in mammalian cell culture," says the report's author, Alex D. Kanarek, Ph.D., president of Bio-Development Consulting Services.

The report finds that there is concern by contract manufacturing organizations that if their expansions are too late they will be forcing clients to reconsider creating or expanding their own facilities. According to Dr. Kanarek, several manufacturers already have decided to go it alone, rather than rely upon the availability of contract capacity.

Tufts Predicts **INCREASED OTC SWITCHES** and Improvements in Biotech Manufacturing

As patents expire on existing medicines, drug companies looking to boost revenue will increasingly find it attractive to switch drugs from prescription to over-the-counter status, according to the Tufts Center for the Study of Drug Development.

"With several blockbuster prescription drugs hav-

ing lost their patents in 2002, drug sponsors, third-party payers, and regulatory agencies will push to switch products from prescription-only to OTC status, returning to the higher levels of switches of the mid-1990s," says Tufts Center Director Kenneth I. Kaitin.

According to the Tufts Center, five prescription drugs changed to over-the-counter status in the U.S. in 1995. That dropped to zero in 1998 and has been rising since. Last year, four products made the switch.

"With new medicines increasingly difficult to develop — especially blockbuster drugs — moving prescription drugs with recently expired patents to over-the-counter status has proven to be a valuable approach," Mr. Kaitin says.

NEAR-TERM PHARMACEUTICAL INDUSTRY TRENDS

- **DISEASE MANAGEMENT PROGRAM ACCREDITATION WILL RISE**, with 15 new disease management firms likely to be accredited by the National Committee on Quality Assurance in 2003, up from the 10 that were first accredited in 2002.
- In the absence of federal prescription drug legislation, initiatives such as the **ESTABLISHMENT OF MULTI-STATE PURCHASING ENTITIES WILL EXPAND**, from 26 U.S. states in 2002 to about 35 by the end of 2003.
- In response to calls for reform of the for-profit pharmacy benefits manager industry, **PBMS WILL FURTHER INTEGRATE THE COST AND CLINICAL ASPECTS OF THEIR BUSINESS ACTIVITIES**.
- **SHORT-TERM DELAYS IN BIOLOGICS LICENSE APPLICATION APPROVALS MIGHT OCCUR** as FDA review of therapeutic biopharmaceutical products shifts from the FDA's Center for Biologics Evaluation and Research to its Center for Drug Evaluation and Research (CDER).
- **CDER'S AUTHORITY OVER BIOPHARMACEUTICAL REVIEWS WILL INTENSIFY** examination of the regulatory and legal framework surrounding generic biologics. Scientific advances associated with proteomics might be the key that unlocks the door to generic biopharmaceutical products.
- Assuming 70% of the products currently in Phase III study are successful, CDER can expect **35 ADDITIONAL NEW APPLICATIONS DURING THE NEXT ONE TO THREE YEARS**.

Source: Tufts Center for the Study of Drug Development

PHYSICIANS WILL USE FEWER BRANDED ACE Inhibitors and Calcium Channel Blockers

A shift in prescribing patterns for major antihypertensive drugs is possible in 2003, according to a study by marketRx. The potential shift follows release of the ALLHAT study, which showed low-cost thiazide diuretics to be generally as effective in improving patients' health as more expensive prescription drugs.

Physicians interviewed expect to decrease net use of ACE inhibitors overall. Similarly, prescriptions for calcium channel blockers could decline overall. In addition, physicians plan increasingly to shift from branded agents to generics. These physicians expect the percentage of their patients on generic ACE inhibitors and calcium channel blockers to jump this year.

Follow up

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DOW JONES & COMPANY, New York, publishes The Wall Street Journal Online, the largest paid subscription news site on the Web with more than 664,000 subscribers. For more information, visit wsj.com.

DRUG & MARKET DEVELOPMENT PUBLICATIONS, Westborough, Mass., is part of the Informa Group Plc. and publishes D&MD Newsletter and Bioprocess News, in addition to its line of D&MD Reports, Executive Briefings, Focus Reports, and How-To Guides. For more information, visit drugandmarket.com.

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