FOOD AND DRUG ADMINISTRATION
PROGRESS AND PRIORITIES 2004

PROTECTING AND ADVANCING AMERICA'S HEALTH

September 2004

U.S. Department of Health and Human Services

Food and Drug Administration

MISSION STATEMENT

The FDA is responsible for protecting the public health by assuring the safety, efficacy, and security of human and veterinary drugs, biological products, medical devices, our nation's food supply, cosmetics, and products that emit radiation. The FDA is also responsible for advancing the public health by helping to speed innovations that make medicines and foods more effective, safer, and more affordable; and helping the public get the accurate, science-based information they need to use medicines and foods to improve their health.

Availability

This report is also published on the Internet in hypertext markup language and in Adobe Acrobat Portable Document format. The locations are:

HTML: http://www.fda.gov/oc/initiatives/reports/priorities2004.html.

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TABLE OF CONTENTS

Acting Food and Drug Commissioner's Message 2

Introduction.....4

Part 1: Enabling Technology Development and Innovation 6

Background.....7
Progress to Date.....8
Priorities for Coming Year 14

Part 2: Patient and Consumer Protection 16

Background.....17
Progress to Date.....18
Priorities for Coming Year 22

Part 3: Protecting the Homeland—Counterterrorism.....23

Background.....24
Progress to Date.....24
Priorities for Coming Year 28

Part 4: Using Risk-Based Management Practices.....29

Background.....30
Progress to Date.....32
Priorities for Coming Year 38

Part 5: Empowering Consumers for Better Health 39

Background.....40
Progress to Date.....41
Priorities for Coming Year 45

Part 6: Improving FDA's Business Practices.....46

Background.....47
Progress to Date.....47
Priorities for Coming Year 51

Where to Find More Information 53

ACTING FOOD AND DRUG COMMISSIONER'S MESSAGE

In August 2003, we unveiled a comprehensive strategic action plan to "protect and advance America's health" in the 21st century. Our plan outlined a series of specific steps to combat the increasingly complex public health challenges we face as a nation—and to capitalize on the myriad health innovations occurring each day—in order to help Americans live longer, healthier, and happier lives.

After a year of hard work by our dedicated staff, it gives me great pleasure to present this 2004 report on our progress and priorities.

This report articulates a number of unprecedented achievements we have seen over the past 12 months:

- We have enhanced consumer protection through new bioterrorism countermeasures and through landmark regulation for safer dietary supplements.

- We have paved the way to quicker access to safe and affordable medicines in the future by introducing various initiatives to increase productivity in new product development.

- We have improved the efficiency of internal product reviews at FDA.

- We have bolstered protections against medical errors through novel safety standards, innovative technologies and improved surveillance systems.

- We have empowered consumers to improve their own health through better information about the foods they eat and the medicines they consume.

- We have made great headway in creating efficiencies, standardizing processes, enhancing our infrastructure, and improving our planning to create a stronger, more unified, more effective Agency.

This progress report also outlines the path forward. We have set forth a bold public health agenda for the year to come, and we intend to realize our promise to the nation. This includes finishing up our existing initiatives as well as turning to face a host of new public health imperatives.

A physiologist of the 19th century described the brain as a "fantastic weaving shuttle," a term of amazement. One could describe the FDA of today as just that. As the work of our centers and field force come together to provide a protective tapestry for the American people, we fully realize that tomorrow will present new hazards that we will need to urgently address. We know we can only do this through the application of science, reason, and hard work.

Ours is no small task, and we did not become known throughout the world for what we do except by rising to each occasion and capitalizing on our public health opportunities to overcome our challenges.

"We have set forth a bold public health agenda for the year to come, and we intend to realize our promise to the nation."

This is the fourth time I have been at FDA and the second time I have been at the helm, all over a 30-year period. I have been proud of all those stints, but I do believe the present FDA more than ever understands our mission to protect as well as advance the nation's health, and I am more than confident that we are equal to the public health imperatives of this day and this time.

I would like to thank all of my colleagues at FDA and at the Department of Health and Human Services for their steadfast commitment to advancing America's health. I look forward to communicating to you even greater successes in the time ahead.

Lester M. Crawford, DVM, Ph.D.
Acting Food and Drug Commissioner

INTRODUCTION

Over the past year, we at the Food and Drug Administration have worked hard to address key challenges in fulfilling our public health mission. Our goal is to maximize the benefits and minimize the risks from the products we regulate, providing high quality and consistent oversight in an environment of changing public health risks, new technologies and changing market dynamics. We do this by continuously applying the best science and most effective management to get the most public health bang for our regulatory buck. In this report we focus on the progress we have made in the last year within six priority areas—our major challenges and accomplishments. Further, we provide a short list of our priorities for the coming year.

Strategic plan progress

At the end of July 2004, we had completed 34 percent of the actions identified in our Strategic Action Plan, while 61 percent were on-going and on-target. Of those on-going actions, we expect to complete 77 percent over the next 12 months.

This report presents selected highlights and continuing priorities in six key areas that flow from work around our strategic goals.

In each of the sections, we punctuate the general summaries of progress with a sampling of specific actions with particular public health significance.

These represent only the "tip of the iceberg." For a more complete account of our initiatives and accomplishments, please visit our Web site at http://www.fda.gov.

Growing responsibilities in consumer protection and promotion

We are responsible for protecting the safety and security for most of the U.S. food supply. We are also responsible for ensuring the safety and effectiveness of all the medical devices and medicines used by U.S. patients. The benefits brought by these products have increased tremendously with the evolution of technologies and expansion of global markets. Consumers now have access to a richer and ever expanding diversity of food and drug products, offering more choices and opportunities for better health and nutrition. For example, the market for dietary supplements has grown from $4 billion in 1994 to $19.4 billion in 2004. The number of prescriptions dispensed to U.S. patients has grown from about 2 billion in 1993 to nearly 3.5 billion in 2003. The "lines of entry" (places from which foods and other imported products flow) into the United States have grown from 2 million in 1993 to about 9 million in 2003. However, these changes, together with increasing concerns about the security of our food and medicine supply, add new challenges and complexity to our consumer protection responsibilities.

In addition to our public health protection mandate, Congress has directed us to promote the public health, including, for example, speeding access to safe and effective new products. This work also presents new challenges—many novel technologies are stalled in the development "pipeline" because of a lack of modern tools and techniques for testing and assuring their safety and effectiveness. One result has been a decrease in the number of marketing applications for many types of new products and increased costs for bringing a new product to market.

For example, the average cost of bringing a new drug to market has grown from $231 million in 1987[1] to $802 million in 2000[2]. For consumers, this may mean higher costs and fewer new products to improve health.

Given the role that FDA-regulated products can play in getting and keeping people healthy, we also have a role to play in ensuring that people use these products appropriately. We all look with alarm on the nation's growing epidemic of obesity and related medical conditions such as diabetes. We need to ensure that people get the information they need about their foods and medicines so that they can understand the impact of their dietary and medical choices on their present and future health. This means that the information must be in language, and in a form that they can effectively use.

In sum, we face new and continuing challenges in meeting our mission of protecting and promoting public health through the products we regulate.

Our strategic plan to meet our challenges

In the spring of 2003, our senior managers focused on these challenges to develop a strategic plan that would guide our future efforts. In August 2003 we issued that plan. For each goal area identified, we identified several key objectives and supporting strategies. Our senior managers further fleshed out the plan with over 300 specific action items with identified milestones and delivery dates. Our plan is available on the Internet at: http://www.fda.gov/oc/mcclellan/strategic.html.

The action items associated with our strategic plan are tasks that we have taken on above and beyond our everyday responsibilities. These responsibilities include:

- Reviewing the science that supports required prior approval of medical products and food additives.
- Enforcing the multiple laws ensuring that patients and consumers are kept safe from contaminated or otherwise low quality products.
- Educating the public about how to properly use the products we regulate.

More information about how we are doing in these areas and others can be found in the performance reports for our centers and other organizational components.

Our progress report has six sections (see box). We hope that the additional efforts we are investing in implementing a strategic plan will ultimately improve how we carry out our everyday responsibilities that have such a pervasive impact on the health of America.

Report sections

- **Part 1** addresses the core scientific and regulatory issues surrounding the technology development and innovation aspect of efficient risk management—using our limited resources most efficiently to provide the most health promotion and protection at the least cost for the public.
- **Part 2** addresses our efforts toward protecting patients and consumers by seeking continuous improvement in patient and consumer safety by reducing risks associated with FDA-regulated products.
- **Part 3** focuses on our efforts to protect America from terrorism by strengthening our capability to identify, prepare for, and respond to terrorist threats to the homeland.
- **Part 4** addresses the element of efficient risk management that requires using risk-based management practices across a wide range of regulatory activities.
- **Part 5** summarizes our progress toward empowering consumers for better health – getting consumers and patients the information they need to weigh the benefits and risks of FDA-regulated products and help them make smarter decisions about their health.
- **Part 6** reviews our progress toward achieving more effective regulation by improving agency management operations critical to our efficiency and effectiveness.

1. Estimated cost in 1987 dollars, JA DiMasi, RW Hansen, HG Grabowski, and L Lasagna. 1991. "Cost of Innovation in the Pharmaceutical Industry", Journal of Health Economics 10(2): 107-142.

2. In 2000 dollars, JA DiMasi, RW Hansen, and HG Grabowski. 2003. "The price of Innovation: New Estimates of Drug Development Costs", Journal of Health Economics, 22(2): 325-330.

PART 1: ENABLING TECHNOLOGY DEVELOPMENT AND INNOVATION

We will continue to promote speedier access to innovative medical technologies, both through our internal Innovation Initiative and collaborative Critical Path effort. We will also look to apply similar critical thinking in the food arena, both to ensure consumer safety and foster innovation that helps establish healthy nutrition and dietary patterns throughout life.

All of the Department of Health and Human Services agencies are in close collaboration as we move forward to the realization of electronic healthcare in the United States. Personalized medicine, prevention of medical errors, and electronic surveillance of counterfeit drugs represent just a few of the facets of this revolution in care that will involve us.

Progress Highlights

- Made significant progress on our long-term goals to speed safe and effective medical products to patients.
- Addressed the problem of antimicrobial resistance that results from the use of new antibiotics in food animals.
- Embarked on an initiative to improve the scientific tools needed to improve and speed up the development of medical products.
- Began to address the public health crisis of obesity.
- Collaborated with the National Institutes of Health to advance the process of developing and reviewing new treatments for cancer.

Priorities Highlights

- Identifying key opportunities to improve the efficiency of medical product development.
- Improving the nation's health by fostering innovation in food technology and nutrition communication.

Background

During the past several decades, medical and food technology innovations have transformed our lives. We have eliminated the disease and disability commonly experienced with chronic malnutrition. Preventive techniques using new and traditional food production, processing and packaging technologies have reduced the incidence of foodborne illness. New medicines and medical devices have transformed diseases that once killed suddenly and unexpectedly into chronic conditions that can be well-managed. Despite these achievements, many devastating diseases still lack effective treatments, and chronic disease and disability are becoming more prevalent. To continue to improve Americans' health and longevity depends on the success of industry innovation to increase the public's access to healthy affordable food products and safe, effective, and affordable medical products.

When developing a truly new medical technology, companies often grapple with critical unknowns that can slow or stop a product from reaching the market, such as technical unknowns and regulatory unknowns. In some cases, companies also face market uncertainties related to the public's perception of product risk. Using the best science can reduce risk perceptions and greatly increase innovative productivity.

We can help reduce developmental uncertainties—and help move new products to the market faster—in two different ways:

- **Improve product review.** First, we can improve the process of product review and reduce regulatory barriers to approval. Making the marketing application review process faster and more efficient is one of our highest priorities. We are committed to applying clear science-based standards; maintaining a transparent, high-quality process that features early communication and feedback to companies who sponsor the applications under review; and achieving ambitious review performance goals, making the review process both speedy and predictable.
- **Stimulate development.** A second element of our approach involves working to stimulate development of a better set of tools that use the latest science to reduce scientific uncertainties and improve productivity of the development process itself. We believe that expanding our work in this area could dramatically reduce the risk, cost and time required to bring innovative medical products to the market.

Progress to Date

During 2004, FDA has made significant advances in providing a timely, high-quality, cost-effective process for reviewing marketing applications. We have reduced avoidable delays and costs in product approvals by analyzing the root causes of multiple review cycles, establishing steps to prevent unneeded additional cycles, clarifying expectations, and communicating standards.

We also have developed and issued a number of cross-cutting guidance documents on product development, directed research programs, and developed standards to effectively handle emerging technologies.

Human drugs, biologics

A major cause of delay in the approval of new drugs and biologics is the need for multiple cycles of Agency review to address the deficiencies found in a company's marketing application about unresolved questions regarding product safety, effectiveness, or the company's ability to manufacture the product at a consistent level of quality at commercial scale. In some cases, the problems can be resolved quickly if we communicate the deficiencies early in the first cycle of review and if companies respond quickly. To reduce avoidable delays in human drug and biologics review, we implemented the First Cycle Review initiative, including issuing a new guidance document and reviewer training on Good Review Management Principles that, for example, call for earlier communication of deficiencies noted by FDA reviewers in the first weeks of application review (see Table 1).

We also implemented two pilot programs for reviewing continuous marketing applications for fast-track products in development. One program enables sponsors to get early feedback on their submissions by submitting sections of their marketing application before the submission is complete. The other provides more frequent communication starting in even earlier phases of development.

We believe that the many changes we have been making in our review processes will reduce average FDA time to product approval and thereby speed safe and effective medical products to patients. Consequently, we have committed to achieving certain ambitious reductions in approval time for drug and biologic applications. We have already made significant progress toward these goals. The ultimate reduction goals are for fiscal years 2005-2007 and will be compared with approval times for a baseline group of applications with the fastest approval times during fiscal years 2000-2002.

Table 1

We exceeded our goals for deficiency notification

A substantive deficiency in a marketing application for a new medicine can delay its approval and availability to help patients. Early notification to sponsors of deficiencies in their applications can help avoid delays.

Our initiative to notify sponsors of substantive deficiencies that we identify during the initial filing review for new medicines began Oct. 1, 2002. Our goal is to report the presence or lack of substantive deficiencies within 14 days after the 60-day period during which we decide if the application is suitable for review.

We committed to achieving this goal for 50 percent of applications in fiscal year 2003, progressing to 90 percent in fiscal year 2004 and remaining at that level.

We met the notification date with 84 percent of notifications, significantly outperforming our goal of 50 percent.

- One of these ambitious goals is for a 30-day reduction in average approval time for new drug applications for new molecular entities and biologics license applications that are given priority review. To date, we have already achieved an average 70 percent of that targeted 30-day reduction (21 days on average).
- The second goal is for a 60-day reduction in average approval time for new drug molecular entities and biologics license applications that are given standard review. To date, we have already achieved, on average, a greater than 90 percent of the targeted 60-day reduction (55 days on average).

More details on our review goals for human drugs and biologics can be found in our performance report at http://www.fda.gov/oc/pdufa/.

Medical devices

To provide more timely and cost-effective review of new medical devices, we have worked to implement the Medical Device User Fee and Modernization Act of 2002. That law allows us to collect user fees from companies that submit medical device applications. We use these additional funds to hire more staff and develop better systems to support more effective and timely review.

The law requires us to pursue a complex and comprehensive set of review goals. Each year brings additional goals, and the goals become more aggressive each year. We must report on performance relative to the specified goals at the end of each year.

To facilitate our interactions with industry as the program is implemented over the next several years, we have issued guidance documents on premarket approval applications, premarket assessment of pediatric medical devices, how FDA and industry actions on premarket notification (510(k)) submissions affect our assessment, and use of validation data in 510(k) submissions for reprocessed single use devices. (See http://www.fda.gov/cdrh for the specific guidances.)

We have also committed to two ambitious long-term goals for reducing average total approval time for medical device premarket applications, and have already achieved one of these goals, even though it was targeted for fiscal years 2005-2007. It is for a 30-day reduction in average approval time for premarket applications given expedited approval, which is similar to priority approval for drugs and biologics. We have already achieved that goal and more—a 33-day reduction in average approval time compared with the baseline of fiscal years 1999-2001.

Guidance to industry speeds development

We also developed new guidance documents to facilitate the submission of high-quality product applications that can be reviewed more rapidly and are more likely to be approved.

An analysis of major reasons for delay of approvals found that availability of FDA guidance is a critical factor associated with shorter time to approval.

Over the past year, we have issued a number of guidance documents on various medical devices, including:

- Vascular and neurovascular embolization devices.
- Saline, silicone gel, and alternative breast implants.
- Screening tests for drugs of abuse.

These efforts have helped us make significant progress toward our long-term goals for medical device review.

Animal drugs

We are concerned that human health not be adversely affected from antimicrobial-resistant foodborne bacteria that result from using new antimicrobial animal drugs in food producing animals. To ensure continued development of safe and effective new animal drugs that also protect human health, we have issued a guidance document that provides information to address these concerns. This risk assessment guidance discusses an approach for evaluating the microbial food safety of antimicrobial new animal drugs.

To facilitate early communication and feedback to sponsors of new animal drug applications, we are nearing completion of work on a final rule on presubmission conferences for sponsors of new animal drug applications.

The Minor Use and Minor Species Animal Health Act of 2004 is expected to increase the availability of new therapies for animals, including zoo animals and some pets for which treatments for many ailments currently do not exist or are not available. This legislation will establish two new ways to legally market new animal drugs while safeguarding public health and making available incentives, such as grants, for developing certain new animal drugs for minor uses and minor species.

Important medical product approvals in past year

- Epzicom (abacavir and lamivudine) and Truvada (tenofovir disoproxil and emtricitabine) are two fixed-dose combination treatments for HIV-1 infection. These combination products make it easier for patients to comply with medication regimens.
- We approved several products as a result of incentives managed by our Office of Orphan Products Development. Two products received seven years of marketing exclusivity and were assisted in development by grants from the Orphan Products Grants Program.
- Vidaza (azacitidine) injection is the first effective treatment for patients with Myelodysplastic Syndrome, a bone marrow disease. The medicine is thought to work by restoring normal growth and differentiation of bone marrow cells. Vidaza was developed with the assistance of funding from the Orphan Product Grant Program. The product was given fast-track status and a priority review.
- Taxotere (docetaxel) injection in combination with prednisone (a steroid) for treating advanced metastatic prostate cancer. This is the first drug approved for hormone refractory prostate cancer that has shown a survival benefit.

- OraQuick® Advance Rapid HIV-1/2 Antibody Test detects antibodies to HIV-1 and HIV-2 in oral fluid with over 99 percent accuracy in as little as 20 minutes. We also granted a laboratory waiver that expands the number of sites that can evaluate this test from 38,000 laboratories to more than 100,000 sites, including physician offices, HIV counseling centers and community health centers.
- New recombinant DNA-derived clotting factor to treat people with hemophilia A. This new antihemophilic human factor VIII product is the first one produced without using materials derived from human or animal blood in the manufacturing process, minimizing the risk of product contamination from human or animal disease pathogens.
- Canine insulin for the reduction of hyperglycemia and hyperglycemia-associated clinical signs in dogs with diabetes mellitus.
- Topical anti-inflammatory cream for use in horses. The drug product is indicated for the control of pain and inflammation associated with osteoarthritis in joints.
- We enhanced vaccine availability. Prevnar protects infants and small children from certain pneumococcal bacteria that can cause life-threatening meningitis and blood infections. We approved an application from the vaccine's manufacturer that allows for filling and testing by a contract manufacturer. This approval will aid in alleviating the current shortage by expanding manufacturing capacity.
- We approved a new vaccine for adult use for tetanus and diphtheria toxoids. This vaccine is indicated for primary and booster immunization of persons 7 to 59 years of age against tetanus and diphtheria.

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Cross-cutting efforts

Although changes within each product review program help advance earlier access to safe and effective new medical products, additional improvements can be achieved through multi-center, or cross-cutting, efforts. During the past year, we have engaged in this kind of work in several major areas, including cancer and obesity.

Table 2

Electronic standards progress

- We have adopted the Study Data Tabulation Model from the Clinical Data Interchange Standard Consortium for the exchange of data from clinical trials in human drugs. This model is being extended to include information on the study protocol, planned assessments and interventions, and statistical analysis plans.
- We have adopted the annotated electrocardiogram waveform data standard developed in Health Level Seven for the exchange of ECG data collected in clinical trials. This data allows reviewers to more efficiently evaluate drugs for potential cardiac toxicity.
- We have adopted the Health Level Seven Structured Product Labeling standard for the exchange of medication information. Structured Product Labeling may also be used for other regulated products.
- We are developing a common table of contents for applications used across the agency. The table of contents is based on work done in the International Conference on Harmonization for Human Pharmaceutical Products.

Critical path initiative for medical product development

In March 2004, we published a key report, *Innovation/Stagnation—Challenge and Opportunity on the Critical Path to New Medical Products,* in an effort to draw attention to the serious shortcomings of current tools and methods used in pharmaceutical product development. Our report is available on the Internet at http://www.fda.gov/oc/initiatives/criticalpath/whitepaper.html.

Our report announced a cross-cutting effort to work with relevant stakeholders to upgrade the scientific tools used to predict and assess the safety and efficacy of product candidates as well as the tools used to manufacture and assess the quality of medical products. Since March, we have been working to identify specific opportunities for focused efforts to modernize product development tools. We are now evaluating the public input received so far with the goal of announcing an initial action plan. This is a long-term effort that, if successful, could contribute significantly to reducing the cost of bringing new treatments to American patients

We also are participating in the Medical Technology Innovation Task Force, announced by the Secretary of Health and Human Services. In addition to FDA, the task force includes the Centers for Disease Control and Prevention, the Centers for Medicare and Medicaid Services, and the National Institutes of Health. Our acting commissioner is leading the task force.

Electronic standards

We are working closely with other government agencies, academia, and industry to develop standards for the electronic exchange of information critical to our mission. From clinical research data to medication information to adverse event reports, having data submitted in a standardized structure will improve our ability to evaluate and manage information. Furthermore, standard data formats will enable us to provide up-to-date medication information to healthcare providers and to quickly uncover potential product safety problems. In addition to being consistent with our Critical Path Initiative, the electronic standards effort will help automate the largely paper-based clinical trials research process, foster easier communication and collaboration among clinical researchers, enhance data integration opportunities, and help reduce data management barriers to sharing the latest clinical trial data (see Table 2).

Cancer

We have joined with the National Cancer Institute to form an Interagency Oncology Task Force to pursue the shared goal of increasing early access to safe and effective new oncology drugs. The task force is advancing the process of developing and reviewing new technology for prevention, diagnosis, and treatment of cancer. The task force is working to:

- Increase the knowledge base for oncology drug development among both NCI researchers and our reviewers.
- Improve the development process by clarifying and streamlining regulatory requirements for investigational new drug studies. For example, in January 2004, we published a guidance that provides exemptions from seeking our approval when conducting investigational studies using oncology drugs that we have already approved.
- Explore the use of proteomics for biomarkers.
- Advance the use of imaging as a biomarker.
- Clarify clinical endpoints for lung, colon, prostate, breast cancer, and myeloma.
- Improve the use of bioinformatics in cancer drug development.

To further enhance the review of new technology to treat cancer, the new Office of Oncology Drug Products, located in our Center for Drug Evaluation and Research, will consolidate that center's cancer review expertise. It will also ensure coordination of review of oncology products being evaluated in our Center for Biologics Evaluation and Review, Center for Devices and Radiological Health, and Center for Food Safety and Applied Nutrition.

Obesity

We assembled an obesity working group to examine how we can take steps to help address this growing public health problem. In its report, *Calories Count*, the working group included recommendations for developing therapeutic options to treat obesity.

It is clear that some obese and extremely obese individuals are likely to need medical intervention to lose weight and mitigate associated diseases and other adverse health effects. Before 1996, all approved obesity drugs were labeled for short-term treatment of obesity based on preapproval clinical trials of no more 12 weeks' duration and of limited size by today's standards.

In 1996, we issued draft guidance that made updated recommendations for the design and conduct of clinical studies to demonstrate the effectiveness and safety of weight-loss medications. In its recent report, the working group recommended revising and reissuing the 1996 guidance.

Calories Count

A copy of our report, *Calories Count*, is available on the Internet at http://www.cfsan.fda.gov/~dms/nutrcal.html.

Priorities for Coming Year

Over the next year, we will accelerate our efforts to increase the public- and private-sector focus and expand work to develop critically needed development tools to transform new technologies into safe and effective medical and food products for patients and consumers.

Critical path to new medical products

The sequencing of the human genome four years ago along with the ongoing investment in biomedical research have raised widespread hope for a new era in the prevention and treatment of disease. But that new era has not yet arrived. Instead, 2000 marked the start of a slowdown in new drug and biologic submissions to regulatory agencies worldwide. The submission of innovative medical device applications has also slowed recently. This means fewer new products can be approved and made available to patients. At a time when basic biomedical knowledge is increasing exponentially, the gap between bench discovery and bedside application appears to be expanding.

Current costs of bringing a new medicine to market—estimated by some to be as high as $800 million to $1.7 billion—are a major barrier to investment in innovative, higher-risk drugs or in therapies for diseases that are uncommon or that predominantly afflict the poor. During the past decade, product development has slowed significantly in areas crucial to public health, such as development of new antibiotics. Sponsors of cutting-edge products such as candidate artificial organs, bioengineered tissues, and other novel devices face serious product development challenges and uncertainties. A viable path for developing many preventive therapies, such as some types of cancer chemoprevention, has not been identified.

We urgently need a new product development toolkit containing powerful new scientific and technical methods—such as animal or computer-based predictive models, new biomarkers for safety and effectiveness, and new clinical evaluation techniques. This will improve predictability and efficiency along the critical path from laboratory concept to commercial product. Improved product development science is critical to ensure that basic discoveries become new medical treatments.

In the fall of 2004, we will announce the first National Critical Path Challenges List, which will identify key opportunities to improve the efficiency of product development. The list will be based on the public input we received and on our reviewers' perspectives on the key scientific hurdles that are delaying the development of promising medical products.

Over the coming year, we will also announce some initial action items and will continue working with other public and private organizations to identify ways we can collaborate to overcome these hurdles. We will also continue to receive input and create an evolving process for identifying and solving Critical Path issues.

Similarly, the Department of Health and Human Services' Medical Technology Innovation Task Force will continue its process of obtaining public input and will issue a report on appropriate steps that can be taken across the department to speed the development and availability of new medical technologies.

Food technology and nutrition

We are extending the process used for the Critical Path Initiative for medical products into the areas of food technology and nutrition. We will focus on finding ways to use new knowledge and technology to foster innovations that will have a lasting positive influence on the long-term health and well being of the American consumer.

Currently there are many areas of knowledge and research that could be used to enhance public health if only they could be channeled into improving and developing a wider range of safe new food and dietary supplement products and processes. Just as critical is the need for more effective communication to consumers about the health benefits of food, food components, and nutrition in general. We are looking at the role of food labeling in educating consumers about better nutrition through health claims for food products and nutritional supplements and better communication of diet-disease relationships. Therefore, the Food Technology Critical Path Initiative will need to address gaps that impede progress in translating existing knowledge and new research findings into improved new and safe food products and processes, as well as gaps in effectively communicating information about food products to consumers.

A major focus of the new Food Technology Critical Path Initiative will be to enhance the long-term health and well-being of the American consumer by finding ways to apply knowledge to both ensure food safety and foster innovation that will help establish healthy nutrition and dietary patterns throughout life. Because nutrition patterns established early in life, from birth to age 20, are known to foreshadow health status in adulthood, research and innovations in these areas (for example, our National Center for Toxicological Research's current "omics" research capabilities) can have a great influence on consumers' overall prospects for long and healthy lives. In the fall of 2004, we anticipate the release of a report on food technology, safety, and nutrition challenges and development opportunities.

PART 2: PATIENT AND CONSUMER PROTECTION

The turn of the century has brought unprecedented new challenges to patient and consumer safety, and we are aggressively moving ahead on a number of important protections, old and new.

For example, we are taking steps to increase patient access to critical medical treatments—from the continued growth of our already-successful generic drug program to the approval of new fixed-dose combination therapies for HIV and the treatment use of investigational drugs for terminal patients.

On the food safety side, we are keenly focused on combating foodborne illnesses, such as "mad cow disease" and the disease associated with *Salmonella enteritidis,* as well as dangerous contaminants like mercury, through new risk-based regulations and consumer education campaigns.

Progress Highlights

- Enhanced our ability to quickly identify risks associated with FDA regulated products.
- Increased our capacity to accurately analyze risks.
- Reduced the risks of specific regulated products by resolving problems and effectively communicating risks to product users, including clinicians, patients and consumers.

Priorities Highlights

- Improving the efficiency and effectiveness of our adverse event reporting system.
- Finalizing our proposed rule to make it easier for health care professional to find and read important information in prescription medication labeling.
- Clarifying and revising our regulations regarding safety reporting for human drug and biological products to further worldwide consistency and increase the quality of our safety monitoring.

Background

The products we regulate can cause problems when they are used improperly and, sometimes, even when they are used properly. We strive continuously to improve our mechanisms for assuring that patients and consumers are protected from product risks.

To increase patient and consumer protection, we are improving our "post-market" monitoring, analysis, communication, and regulatory activities. One of the most promising new ways FDA can improve its system for understanding safety problems is to conduct active surveillance to supplement the current passive reporting systems.

By partnering with healthcare providers, institutions and other government agencies, FDA will more quickly and thoroughly identify and understand risks associated with FDA-regulated products. This information will allow FDA to quickly communicate concerns and prevention strategies, and help to improve the safety of systems for medical care and foods.

Recent studies[1] have estimated nearly double the number of deaths from medical errors that had been documented in the landmark 1999 Institute of Medicine report *To Err is Human*, with an associated cost of more than $6 billion per year. An estimated average of 195,000 U.S. patients died due to potentially preventable, in-hospital medical errors each year from 2000 to 2002.

Sometimes problems occur because consumers or clinicians do not have the right information to use the product safely—or because the product can easily be misused. But preventable events are not caused just by medical errors.

Even with the best available data, products sometimes have side effects that were not predictable or detectable in studies prior to their use in real-world conditions.

Monitoring of the post-market safety experience of a medical product in the years after it is approved is an extension of the safety data gathering activity that begins during the clinical trial phase of development. The size and scope of clinical trials are not designed to fully characterize the safety profile of a product.

1. Health Grades, Inc. July 2004. *Patient Safety in American Hospitals.* Accessed at http://www.healthgrades.com/media/english/pdf/HG_Patient_Safety_Study_Final.pdf on Sept. 13, 2004.

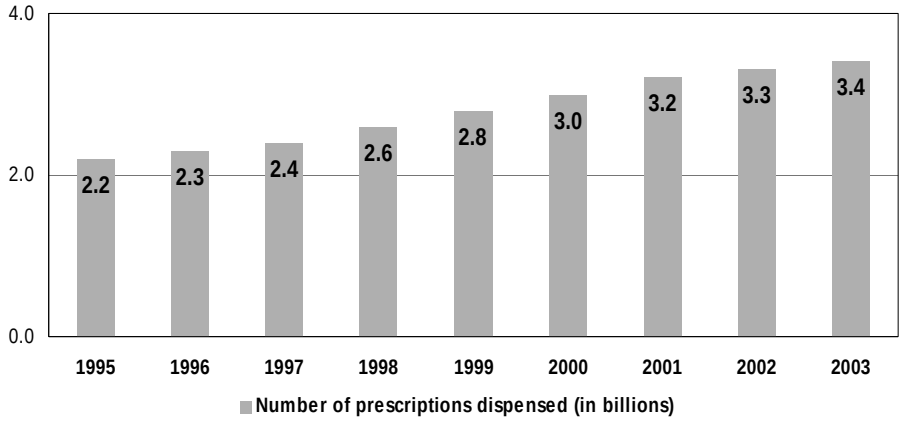
Progress to Date

To further protect patients and consumers, we have worked to improve our ability to identify, understand, and reduce risks associated with the products we regulate. Our goal is to improve the safety and safe use of regulated products.

Our projects have focused on:

- Enhancing our ability to quickly identify risks associated with products we regulate.
- Increasing our capacity to analyze risks accurately.
- Reducing risk by resolving problems with regulated products and effectively communicating risks to product users, including clinicians, patients, and consumers.

Medical products play increasing role in treatment of disease and prevention of disability



Source: IMS Health Inc.

Quickly identify risks

Historically, we have relied on spontaneous reporting systems to identify risks associated with regulated medical products and, more recently, with dietary supplements and other foods.

However, there is considerable evidence that the spontaneous reporting systems alone do not allow for an adequate characterization of the true safety profile for these products. These systems largely depend on health-care providers taking time away from the health care to complete a report, which means many adverse events go unreported.

In addition, many events that are reported may be coincidental—not causally related to the use of the product. However, these systems can provide valuable information, particularly on rare, serious adverse events that may be associated with use of a product and provide a signal for further review.

We need to maximize the efficiency and effectiveness of the spontaneous reporting systems, increase awareness and ease of reporting, and at the same time increase active surveillance.

Accurately analyze risks

We have worked to increase our capacity to analyze risks accurately by:

- Developing analytical techniques to better understand the sources of risks.
- Developing staff expertise to enhance risk analysis.
- Strategically using population-based databases to better analyze risks.

We have been working with other Federal and state partners and private organizations to identify useful sources of data—with a focus on particular risks in specific populations such as children, elderly patients and patients from particular demographic groups or carrying certain genes that may be associated with differences in risks.

We have been collaborating with outside partners to obtain or continue access to other databases to better assess risk. These include data on over-the-counter drugs, pediatric inpatient drugs, and outpatient clinics. Our collaborators include:

- The Centers for Medicare and Medicaid Services to review Medicare patient medical records.
- The Consumer Product Safety Commission to add drug modules to the National Electronic Injury Surveillance System.
- The Centers for Disease Control and Prevention to implement drug and device modules to the National Hospital Surveillance Network.
- Additionally, we have established a partnership with the United States Pharmacopoeia to access data on medication errors.

International collaboration on safety reporting

We have also undertaken a major effort to clarify and revise our regulations regarding safety reporting for human drug and biological products. Since 1990, along with international organizations, we have issued several rules and guidance documents regarding these regulations. Our intention is to:

- Further worldwide consistency in the collection of safety information and submission of safety reports.
- Increase the quality of safety reports.
- Expedite our review of critical safety information.
- Improve our ability to protect and promote public health.

Active surveillance systems

One active surveillance system we use is the Medical Product Surveillance Network (MedSun), which covers medical device events for a subset of hospitals.

> **MedSun Progress Over the Last Year.** In fiscal year 2003, we expanded participation in the MedSun network from 80 to 206 facilities. As of June 2004, 298 hospitals have been recruited into MedSun—with an increase in the reporting rate of medical device problems from an average of less than 0.5 reports per hospital per year to five reports per hospital per year.

FDA long-term goal

Active surveillance

Increase by 50 percent the patient population covered by active surveillance of medical product safety by 2008.

Our Centers for Veterinary Medicine and Food Safety and Applied Nutrition are testing sophisticated, automated systems that will significantly improve our ability to capture adverse event reports and provide rapid analysis to determine if additional regulatory action is warranted.

We joined with the National Institutes of Health to launch a new human gene transfer research data system known as the Genetic Modification Clinical Research Information System or GeMCRIS. It provides an electronic tool to facilitate the reporting and analyses of adverse event reporting and public access to non-confidential adverse event information as well as information on gene therapy clinical trials.

Risk management toolkit published

Additionally, we published draft guidance documents on risk management activities in 2004. These address safety issues that can arise throughout a product's entire lifecycle, including development, review and approval, and post-market phases. These documents cover:

- Premarketing risk assessment.
- Development and use of risk minimization action plans.
- Good pharmacovigilance practices and pharmacoepidemiologic assessment.

These documents can be found at http://www.fda.gov/cder/guidance/index.htm.

Resolve problems, effectively communicate risk

We are also developing new and innovative ways to effectively resolve problems with regulated products—working with product manufacturers, health-care providers, patients, and consumers.

Adverse drug events result in more than 770,000 injuries and deaths each year and cost up to $5.6 million per hospital. About 45 percent of adverse drug events are caused by medication errors that occur in dispensing or administration—and published reports suggest that bar code point-of-care systems can reduce this by up to 80 percent.

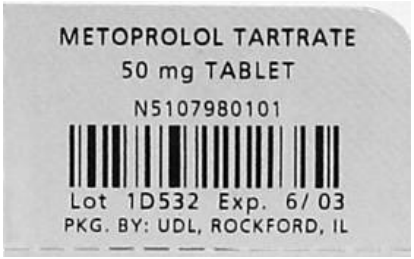
We are also identifying new ways to inform physicians, pharmacists, nurses, and patients about the safety of regulated medical products and to communicate risks effectively:

- **DailyMed.** One important example is through electronic product labels. We are working with the National Library of Medicine to set up DailyMed—a new way to distribute up-to-date and comprehensive medication information in a computerized format for use in health care information systems. By making current information about FDA-regulated medical products readily available to patients and health care providers, DailyMed will help to reduce medication errors and improve patient safety.
- **Patient Safety News.** We have also developed a monthly video news program for busy health professionals called "FDA Patient Safety News." Every month, the show brings life-saving information straight from us to physicians, nurses, pharmacists, risk managers, and educators. Our stories cover safety alerts and recalls, tips on preventing medical errors, and significant new product approvals. A recent survey of viewers indicated that 94 percent of respondents used the program's safety recommendations "frequently" or "occasionally." The show also recently received an Award of Excellence from the National Association of Government Communicators.
- **West Nile virus.** We recently issued revised recommendations for the assessment of donor suitability and blood and blood product safety in cases of known or suspected West Nile virus. We led a collaborative effort to develop and implement nationwide donor screening for West Nile virus, removing over 1,000 infected units from the blood supply in 2003 and 2004.
- **Threat to food supply.** We recognized that chronic wasting disease was spreading rapidly in white-tailed deer. Because route of transmission for the disease is poorly understood, we quickly made recommendations regarding the use in animal feed of rendered materials from deer and elk that test positive for the disease or that are at high risk for infection. These recommendations are in step with federal efforts to ensure that tissues infected with chronic wasting disease from deer and elk do not contaminate human foods.

Bar code rule

In an effort to reduce medication errors, we published a rule, "Bar Code Label Requirements for Human Drug Products and Blood," which requires bar codes on prescription drugs, over-the-counter drugs packaged for hospital use, vaccines, blood, and blood components.

We estimate that the bar code rule will enable the adoption and use of bar coding scanners at the point of care and result in 413,000 fewer adverse events over the next 20 years.



FDA long-term goal

Hospital bar code use

By 2008, we will aim for an 11 percent reduction in adverse drug events related to medication dispensing and administration errors in 50 percent of hospitals in the United States by requiring bar codes on drugs and biologics.

Priorities for Coming Year

In the coming year, we will continue to focus on high priority safety areas—completing projects that will allow us to improve the safe and effective use of all regulated products:

- **Adverse events.** We are committed to improving the efficiency and effectiveness of our adverse event reporting systems, while at the same time reducing their costs and complexity. We are currently analyzing adverse event and consumer complaint reporting processes and our own systems. Our goal is to develop a common reporting system to be used as a single point of entry for the public, including patients, consumers, and health care providers to report all adverse events and product problems. The system would accept both individual and bulk electronic reports from all types of users. This will be known as the FDA Adverse Event Reporting System, or FAERS, and would produce a system compatible with all our problem reporting systems.
- **Prescription medication labeling.** We are finalizing our proposed rule, entitled "Requirements on Content and Format of Labeling for Human Prescription Drug and Biologics." This proposal to revise current regulations would require that the labeling of new and recently approved products include a section containing highlights of labeled prescribing information and an index to the information. The purpose is to make it easier for health care practitioners to find and read information important for the safe and effective use of prescription drugs. The revisions reflect those that we believe will improve prescription drug labeling to more optimally communicate important drug information to healthcare providers. Enhanced communication should make them better-informed prescribers.
- **Safety reporting.** We are proposing to amend the safety reporting regulations for human drug and biological products to implement definitions and reporting formats and standards recommended by the International Conference on Harmonization and by the World Health Organization and to codify our expectations for timely acquisition, evaluation, and submission of relevant safety information for marketed drugs and licensed biological products. Further, we intend to require that certain information, such as medication error reports, be submitted to us in an expedited manner.

PART 3: PROTECTING THE HOMELAND—COUNTERTERRORISM

The past year has witnessed some of the most significant enhancements to our food safety and security program in decades. Going forward, we will finalize implementation of our new food security regulations and also expand our capabilities through new mobile laboratories, intensified inspections, and closer interagency collaboration.

Additionally, we will continue to work with public and private sector partners to accelerate the development and availability of safe, new medical countermeasures.

Progress Highlights

- Implemented systems to provide for the rapid analysis of food samples for contamination by terrorists.
- Conducted vulnerability assessments of the nation's food supply.
- Facilitated development of medical countermeasures.
- Approved medical treatments for exposure to radiation and anthrax.
- Enhanced our ability to respond rapidly and effectively to terrorist emergencies and other crises.
- Enhanced security of our laboratories, buildings, sensitive information systems, and personnel.

Priorities Highlights

- Implementing our new authority to permit the use of unapproved products in emergencies.
- Continuing our work with government and industry partners to develop safe and effective new medical countermeasures.

Background

The events of September 11, 2001, the anthrax attacks that fall, and other terrorist activities related to potential food contamination, have not changed but rather have underscored the importance of our mission of consumer protection. We are now in the process of refocusing our efforts to carry out that mission in a changed world. Our regulatory authority and responsibility cut across critical elements of the country's counterterrorism efforts. Therefore, we must have the capability to assess and effectively respond to risks associated with a broad range of terrorist-related health and safety threats to the public.

Two of our greatest challenges are to facilitate the development of medical countermeasures and to safeguard regulated products. For example, terrorists could use imported food to introduce deadly diseases into the country, or they could tamper with our drug supply. Also, FDA-regulated products, such as human and animal drugs, vaccines, blood, and other blood products, would play a central role in countering the effects of terrorism if an attack should occur.

Our approach to countering the terrorist threat involves working with industry to develop medical countermeasures using state-of-the-art science, collaborating with other responding agencies and organizations, strengthening the FDA's own preparedness and response capabilities, and remaining vigilant against potential threats to our nation's health and security.

Progress to Date

Protecting security of food products

We are responsible for ensuring the safety of approximately 80 percent of the nation's food supply. The possibility of food products being used as a vehicle for attack is particularly worrisome because such an event potentially affects everyone in the country. The production of food is so extensive that, if even a small number of contaminants were intentionally introduced into a part of the food chain, public confidence in the safety of the nation's food supply could result in staggering economic losses for the agricultural industry.

We have contributed to enhanced security of our food supply by implementing critical provisions of the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, also known as the "Bioterrorism Act." This law requires that we receive prior notice of imported food shipments into the United States. We will use this information to prioritize our inspections.

The law also requires domestic and foreign facilities that manufacture, process, pack, or hold food for human or animal consumption in the United States to register with us. In the event of a potential or actual bioterrorism incident or an outbreak of foodborne illness, facility registration will help us determine the location and source of the event and facilitate notification to affected facilities.

A third food-related provision is administrative detention, which authorizes us to detain an article of food for which there is credible evidence or information indicating it presents a threat of serious adverse health consequences. Interim final rules for the prior notice and registration requirements were published in October 2003, and a final rule on administrative detention was published in May 2004.

Additional enhancements to our food security operations include:

- **Rapid analysis of food samples for threat agents.** The Food Emergency Response Network is a joint initiative between us and the Department of Agriculture. It consists of government laboratories equipped to detect and identify biological, chemical, and radiological agents in food. Analytical data from the laboratories is reported into the electronic Laboratory Exchange Network, a seamless, integrated secure network that allows public health officials to compare, communicate, and coordinate findings of laboratory analyses. Integrating these two networks has increased our ability to rapidly analyze food samples for threat agents and communicate information over a secure network.
- **Support for veterinarians.** We have also supported development of a database to facilitate rapid access to diagnosis and treatment information for veterinarians, who would be the first to diagnose diseases or threat agents targeting farm animals.
- **Vulnerability assessments.** We have aggressively conducted food threat assessments using a tool that identifies the most likely targets for terrorist attack and designs "shields" to reduce the risk. This effort, which was commissioned by the Homeland Security Council and conducted with the Department of Agriculture, is another example of how we collaborate with others to achieve operational efficiencies in our counterterrorism role.

We have shared our vulnerability assessment tool with government officials in Juriqilla, Mexico, to assist them in identifying vulnerabilities and risks that could compromise the safety and security of their food supply.

We have also shared the unclassified conclusions of our vulnerability assessments with key food industry sectors and are working with them to perform their own assessments.

Countermeasure actions

- In October 2003, we approved Radiogardase, also known as "Prussian blue," for certain types of internal radiation contamination.
- In August 2004, we approved pentetate calcium trisodium injection (Ca-DTPA) and pentetate zinc trisodium injection (Zn-DTPA) for other types of radiation contamination. These approvals were facilitated by a guidance document we published.
- We also issued a final rule regarding the safety and effectiveness of certain currently licensed biological products, including some that can serve as medical countermeasures. The rule confirmed that the currently licensed anthrax vaccine is safe and effective.
- In October 2003, we hosted a two-day workshop dedicated to communicating effective strategies to assist in the development of medical countermeasures. Critical guidance documents have also been published to support the development of innovative medical countermeasures.
- In March 2004, we posted a draft guidance document on developing drugs to mitigate complications from smallpox vaccination.
- We developed a direct final rule for revised spore-former requirements that provides greater flexibility for manufacturers in producing biologic countermeasures.

Facilitating development, availability of medical countermeasures

Medical products must be readily available to prevent, diagnose, and treat illnesses resulting from a terrorist attack. These products include drugs, vaccines and other biological products, blood and blood products, and medical devices.

We are working proactively to support the development of innovative products. One way we are increasing the availability of countermeasures is by working with industry to identify existing products that may be useful as medical countermeasures. We have also continued to address the needs of special populations, including the immunocompromised, pregnant women, infants, children and the elderly, through special dosing studies and guidance.

We collaborate frequently with the Centers for Disease Control and Prevention, the Department of Homeland Security, the Department of Defense, other government agencies, and industry to support the availability of essential products for smallpox, botulinum toxin, anthrax, plague, nerve agents, ionizing radiation and other potential threats.

Protecting safety, security of drugs, biologics, medical devices, other FDA-regulated products

Fostering the availability of medical countermeasures involves ensuring a steady supply of approved products in addition to supporting their development. To support this goal, we conducted vulnerability and needs assessments by reviewing information on facilities that manufacture medical countermeasures. We reviewed security and regulatory needs and identified inspection priorities. We also developed a number of tests that can serve to protect the integrity of products we regulate.

Ensuring safety, security of our assets, information, personnel

In addition to protecting the products we regulate, we have taken measures to protect our assets, including sensitive information, personnel, and physical structures. We continued to strengthen our continuity of operations plan to reduce disruptions to operations in event of an attack and to ensure the safety of our employees.

We further enhanced security at our laboratories that study select pathogenic organisms. We conducted appropriate background checks for our employees who work in these laboratories and implemented site security measures.

Enhancing emergency preparedness, response capabilities

We must be prepared for a wide range of circumstances and contingencies in order to respond effectively to terrorism-related emergencies and crises. We have developed crisis management plans and have strengthened our readiness by partnering with state and federal agencies in conducting emergency response exercises that simulate chemical, biological, and radiological events.

We have also collaborated with international partners. We took part in food safety exercises with Canada and Mexico that facilitated and coordinated the timely information exchange among the countries.

On an interagency level, we work on extensive activities with the Strategic National Stockpile on issues such as streamlining the use of investigational drugs in a crisis and shelf-life extension of current products. Further, we work proactively with the Centers for Disease Control and Prevention on developing processes for collecting post-event safety and outcome information on products distributed to counter a terrorist event.

In another example of effective collaboration, we have worked with the Conference of Radiation Control Program Directors to establish standards for radiation-detecting devices and to support the proper equipping of state emergency response personnel. We also reviewed and approved Redline Alert™, an anthrax exposure diagnostic kit that expedites determining whether a person has anthrax disease.

We have also taken an active role in enhancing our preparedness. We developed a dedicated counterterrorism section comprised of experienced experts in intelligence and law enforcement.

Further, we have been collaborating with other government agencies by contributing our expertise in assessing the vulnerability of the nation's food, agriculture and water supplies. We partnered with the Central Intelligence Agency through our participation on the Interagency Intelligence Committee on Terrorism. We have also partnered with the Federal Bureau of Investigation and other intelligence agencies through participation in the National Joint Terrorism Task Force.

Priorities for Coming Year

While much has been done there is still much more to do to accelerate the availability of medical countermeasures.

To this end, Congress recently gave us authority to issue Emergency Use Authorizations that allow the use of unapproved medical products and approved products for unapproved indications to protect public health during a military, public health, or domestic emergency declared by the Secretary of Defense, the Secretary of Health and Human Services, or the Secretary of Homeland Security.

Before an Emergency Use Authorization may be issued, the Commissioner must determine that:

- The product may be effective in diagnosing, treating, or preventing a serious or life-threatening condition caused by a biological, chemical, radiological, or nuclear agent.
- The known or potential benefits of the use outweigh its known or potential risks.
- There is no adequate, approved, and available alternative.

We are working vigorously to develop draft guidance to implement this important new authority.

We will continue to work with our government and non-government partners to foster the development of medical countermeasures and protect the nation's food and medical supplies.

PART 4: USING RISK-BASED MANAGEMENT PRACTICES

Efficient risk management enables us to provide the most public health bang for our regulatory buck. This is particularly true in the area of product manufacturing: It is impossible for us to inspect every prescription drug pill, every diagnostic testing kit, every animal vaccine, and every food parcel that is manufactured or processed. However, by ensuring the best possible manufacturing practices through tested, quality-improvement modalities, we can assure products of high quality. That is why, in the months ahead, we are outlining the latest, scientific practices in manufacturing across the public health spectrum—from pharmaceutical plant operations to food processing to dietary supplement manufacturing.

Progress Highlights

- Took first steps to modernize our regulations for the manufacture of medical products to encourage the use of the latest innovations.
- Proposed updating our regulations on producing, manufacturing and holding human food.
- Designed a risk-based methodology to conduct inspections.

Priorities Highlights

- Implementing our risk-based model for targeting inspections of drug manufacturing facilities.
- Finalizing our proposed rule for good manufacturing practices for dietary supplements.
- Issuing guidance on how medical device manufacturers can take advantage of our new program authorizing third party inspections.
- Implementing a new system to ensure that donated tissues are safe for patients who receive them.
- Developing a strategic plan for inspection of imports.
- Finalizing our regulations to help prevent the spread of bovine spongiform encephalopathy, also known as “mad cow disease.”

Background

Our mission has become much more complicated. Public health protection now includes addressing unprecedented challenges and threats—ones that are more sophisticated and complex than those of the last century. The number of medical products—drugs and devices—that we regulate now exceeds 150,000, far more than ever before, including more complex products. Almost 3,000 investigational new drugs are under development with manufacturers seeking the evidence needed to support our approval. There are more—and more diverse—dietary supplements on the market than ever before. Americans also have a much broader range of food choices, including more than 7 million food imports this year—with the import numbers growing rapidly. Access to this growing range of products offers opportunities for improving health and improving lives, but it also creates new kinds of vulnerabilities and risks to the public health.

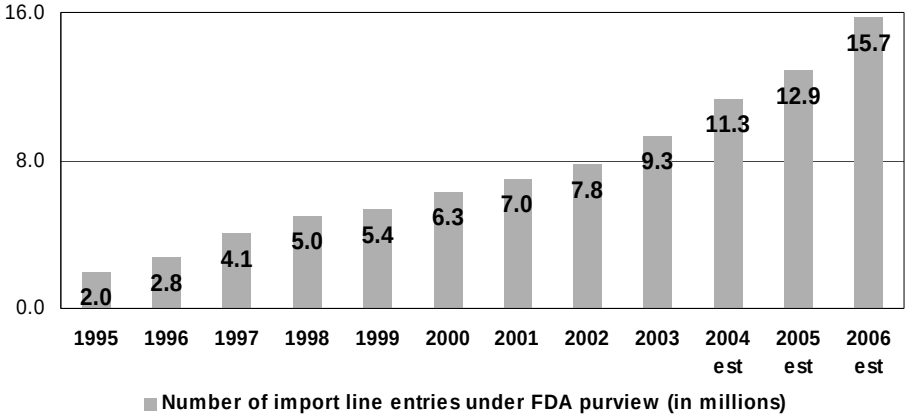
We have identified efficient risk management as the primary way to make the most effective use of our resources and address these challenges. This approach incorporates:

- Rigorous analysis to consistently identify the most important risks.
- Use of a quality systems approach to designing and conducting our core business processes.

A high-priority application of our principle of efficient risk management is focused on our current standards and guidance to industry on the way medical products are manufactured, known as "current Good Manufacturing Practices." The cGMP regulations for drugs have not been updated in 25 years. Meanwhile, best practices in manufacturing technologies and methods have undergone significant progress over that time, particularly in other high-tech industries. We want to make sure that our regulations are encouraging such progress in the pharmaceutical industry. So, we are working on a broad-based program to develop new guidance based on the latest science of risk management and quality assurance.

Meanwhile, our capacity to examine imports physically has not kept pace with this growth. To further enhance import security with limited resources, we are implementing new regulations to address threats and improve our ability to target our field resources to imports that present the most significant risks.

Volume of imported products has been escalating



Growth of imported products under FDA purview

Over the past decade, the number of FDA-regulated imports has increased dramatically (see graph).

In the past five years alone, the number of import line entries[3] has nearly doubled, growing from 5.0 million in 1998 to 9.3 million in 2003.

These imports are:

- 64 percent food products.
- 24 percent medical device and radiological health products.
- 8 percent cosmetic products.
- 2 percent human drugs and biologic products.
- 1 percent animal drugs and feed products.

In fiscal year 2006, we are projecting a total of 15.7 million import lines.

Effective risk management of food is imperative. Foodborne disease remains a serious public health threat. The annual cost of foodborne illness in the United States each year is estimated to be between $7.7 billion and $23 billion.[1] The Department of Health and Human Services projects that the reported incidence of foodborne illness may increase by 10 percent to 15 percent during the next decade. Changes in production practices, centralized product distribution, environmental conditions, and food consumption patterns could be contributing to the emergence of new microbial threats to health.[2]

Our approach to risk-based management includes using the best available data and analytic methods to assess risk and to develop the most effective approaches to identify the most significant hazards, plan inspection work and conduct other compliance and enforcement activities.

1. Food and Drug Administration, Centers for Disease Control and Prevention, Food Safety Inspection USDA Food Safety Inspection Service, "Status Report: Food Safety Objectives Healthy People 2000." Accessed at http://vm.cfsan.fda.gov/~mow/hp2kintr.html on June 20, 2003.

2. Donna U. Vogt, "Food Safety Issues in the 106th Congress," Congressional Research Service Issue Brief, November 7, 2000. Accessed at http://www.ncseonline.org/NLE/CRSreports/Agriculture/ag-38.cfm on June 20, 2003.

3. The number of line entries is used as an indicator of relative volume of FDA-regulated imported products. Sources of data include U.S. Census (1986-1993), U.S. Customs (1994-1996), and FDA OASIS (1997-2002).

Progress to Date

Over the past year, we have pursued several key initiatives to achieve the goal of efficient risk-based management. Some efforts have addressed the fundamental approach we take to allocating our resources and performing the work. We have also undertaken very significant efforts targeted at particular types of product manufacturing and quality assurance.

Quality management, risk management systems

Over the past year, our Management Council has reviewed and adopted the FDA Quality Systems Framework for application across the full range of our programs and processes. Through application of this framework, we will use quality systems to control, assure and improve the effectiveness of the processes to deliver a quality product or service. The quality system framework now incorporated in the FDA Staff Manual Guide defines the essential quality elements for management to address in any system that controls an internal regulatory activity and its relevant management, facility, purchasing, and information technology support, referencing key ANSI/ISO and other external quality management and risk management standards. This work ties together pre-existing quality systems work, such as the Quality Assurance Program at our Center for Food Safety and Applied Nutrition or the Team Biologics and Laboratory Accreditation program, with more recently launched work focused on medical product review and processes related to manufacturing inspections and enforcement.

Pharmaceutical cGMPs for 21st Century

We regulate the manufacture of pharmaceuticals to ensure that the drug supply in the United States is of consistently high quality. In the past, as a result of the many uncertainties in drug manufacturing, we exercised extensive control over every aspect of the process. Over the past year, we have completed a rigorous assessment of current practices and the available new tools of manufacturing science that would enable a progression to controls based on quality systems and risk management. The assessment adhered to five guiding principles:

- Risk-based orientation.
- Science-based policies and standards.
- Integrated quality systems orientation.
- International cooperation.
- Strong public health protection.

We have taken a number of steps to move regulatory practices in this direction, including:

- Finalized a guidance document on electronic records and signatures to incorporate principles of the cGMP initiative to ensure the latest technological advances are encouraged.
- Published a draft guidance on process analytical technologies to facilitate adoption of modern quality management systems.
- Completed a memorandum of understanding between the Office of Regulatory Affairs and the Center for Drug Evaluation and Research to establish a Pharmaceutical Inspectorate and develop course curricula for inspectors. The Pharmaceutical Inspectorate is a state-of-the art, first-of-its-kind inspection cadre consisting of dedicated, highly trained employees within our field force who will devote the majority of their time to conducting inspections for highly complex or high-risk drugs.
- Established a pilot program that will allow for the rapid, objective resolution of scientific and technical questions or issues that may arise either during an inspection or as the result of an inspection. This program has been designed to promote integrity, neutrality, consistency, transparency, fairness, and scientific soundness in the dispute resolution process.

On-going work to assure U.S. food safety

- **Egg Safety.** We are proposing to require shell egg producers to implement measures to prevent *Salmonella enteritidis* from contaminating eggs on the farm. We are taking this action because of the large number of cases of foodborne illnesses and deaths caused by eating shell eggs contaminated with salmonella. If finalized as proposed, we expect a significant decrease in the number of contaminated eggs produced on farms. Ultimately, we expect that this would result in public health benefits through a decrease in the numbers of salmonella-associated illnesses and deaths.

- **Dietary Supplements.** The Dietary Supplement Health and Education Act of 1994 provided us with statutory authority to prescribe good manufacturing practice regulations for dietary supplements. In March 2003, we published a proposed rule to establish GMPs for dietary supplements. We have reviewed the nearly 400 comments on the proposed rule and are currently developing the final rule. The final rule would require manufacturers to ensure the identity, purity, quality, strength, and accurate labeling of their dietary supplements. It would help protect consumers from dietary supplements containing impurities or contaminants as a result of how they were manufactured. It will also be a significant step in assuring consumers that they are buying products that contain the type and amount of ingredients listed on the label. We expect to publish the final rule this coming winter. It is a priority for both us and the Department of Health and Human Services.

- **Food Processing.** We initiated an effort to modernize our regulations for current good manufacturing practice in manufacturing, packing, or holding human food. The cGMPs now in effect were last revised 20 years ago, and the food industry has undergone considerable change during this period. In August 2003, we published a report summarizing a literature review that identified the most common food safety issues encountered at the processor level in the food manufacturing industry and determined the most common products involved and the relative frequency of the specific processor-level problems that contributed to food recalls. We have hosted three public meetings to solicit comments, data, and scientific information about:

  - The current state of quality management techniques.
  - Quality systems approaches.
  - Voluntary industry standards as well as other controls used by food manufacturers and processors to prevent, reduce, control, or eliminate food borne hazards that may occur during food production, processing, or storage.

  We will review the information obtained through the meetings as well as submitted comments and use it to prepare a white paper, intended for completion by the end of September.

Risk-based management

Food imports

Canada and Mexico participated in a pilot study which will ultimately contribute to the inclusion and integration of foreign laboratories into the electronic Laboratory Exchange Network.

We published our Private Laboratory Rule in April, 2004. The proposed regulation is intended to help assure the integrity and scientific validity of data and results submitted to us. When final, this rule will provide confidence for persons who use private sampling services to collect and analyze samples of imported food and will assure that these samples are properly identified, collected, and maintained.

In addition, private laboratories doing this work will be required to use validated or recognized analytical methods and to submit analytical results directly to us.

Risk-based prioritization of inspections

We have initiated a critical, comprehensive review of our practices relating to:

- Planning and prioritizing our inspectional work based upon a risk-based model.
- Conducting inspections as efficiently and as effectively as possible.
- Achieving compliance with the Food, Drug and Cosmetic Act.

The progress being made reflects our commitment to the consistent adoption of risk-management principles. This will result in an inspection and enforcement program that will be the foundation for a strong, robust Agency centered on protection of the public health.

Our work over the past year has involved establishing a process for programs to set compliance priorities by conducting assessments that identify the internal and external hazards a regulated firm faces, address risk estimate and characterization of the hazard, and determine the consequences to the public health as a result of our action or inaction.

Each of our five product centers has made substantial progress in developing appropriate risk criteria and a process for applying those criteria to the inventory of regulated facilities. Risk criteria in development across centers include factors, such as:

- Previous violations.
- Volume of production.
- Product class.
- Manufacturing process characteristics.
- Probability and severity of harm.
- Manufacturing risk control measures.
- Pathogen contamination risk.
- Vulnerability of the product to deliberate tampering or contamination.
- Health consequences for humans or animals.

Facilities we identify as high priority based on such criteria will be included in our inspection work plan for fiscal year 2005.

Work by the Center for Devices and Radiological Health illustrates the process involved in this effort, applied to both domestic and import operations. Last winter, the Center prepared draft proposals for a risk-based work plan, developed criteria for rating proposals, and then held a meeting in March 2004 to review and prioritize inspections for inclusion in our fiscal year 2005 inspection workplan.

Risk-based enforcement

Potentially dangerous, illegally imported drugs

Our November 2003 "Import Blitz" examinations found 1,728 unapproved drugs, including so-called "foreign versions" of FDA-approved drugs, recalled drugs, drugs requiring special storage conditions, drugs requiring close physician monitoring and drugs containing addictive controlled substances.

Leveraging device inspection resources with other qualified parties

We have established and implemented a novel third-party inspection program as mandated by the Medical Device User Fee and Modernization Act of 2002. The program will allow accredited persons to inspect qualified medical device manufacturers, thereby helping us focus our limited inspection resources on higher-risk inspections and allowing companies to more effectively operate in a global marketplace. Forty-three accredited person candidates were trained in January 2004, as part of the third-party inspection program for medical devices.

We have completed a total of 16 agreements with other countries regarding information sharing during fiscal year 2004. This included two memoranda of understanding, 13 confidentiality commitments, and one charter. The confidentiality commitments are of particular value to us in addressing product safety, quality, and security concerns because they allow us and the foreign government to share confidential commercial information while protecting each government's ability to keep the information out of the public domain.

During fiscal year 2004, we implemented the expansion of Good Clinical Practices in clinical studies funded by the Orphan Products Development grants program. Good Clinical Practices will be used when we evaluate grant funding applications for orphan products and conduct site visits of grantees.

Protecting patients and consumers

- **Contaminated donor tissue.** During the past year, we finalized a new rule on donor eligibility for human tissues and cells. This rule will help prevent transmission of communicable disease when these products are transplanted. Broader requirements for tissue bank registration and listing became effective in January 2004. These cover establishments that deal with reproductive tissue and other human cellular products, such as stem cells derived from blood sources including umbilical cord blood. Registration requirements increase our knowledge base about these establishments and products and improve the effectiveness of communications about their risks.

- **Medical device recalls.** These recalls of medical devices occurred because there was a reasonable probability that their use would cause serious adverse health consequences or death:
  - **Drug-eluting coronary stent systems.** Problems found during the manufacturing process could have impeded balloon deflation during coronary angioplasty procedures. Impeded balloon deflation can result in significant patient complications, including emergency coronary artery bypass graft surgery and death.
  - **Bed lifts.** Devices used to lift or move patients in hospitals and nursing homes were recalled after manufacturing defects led to deaths.
  - **Implantable cardioverter defibrillators.** These were found to have defective high voltage capacitors. As a result, the capacitors may have taken longer than normal to charge near the end of the battery service life. This could cause a delay in delivery or a non-delivery of shock therapy resulting in patient injury or death.
  - **Nasal Masks.** The user instructions inform the patient that the mask contains an exhalation port and does not require the use of a separate exhalation device. However, the product was distributed without the exhalation port. Without the port the patient may experience oxygen deficiency that may lead to suffocation.

- **Mad cow disease—bovine spongiform encephalopathy.** After the discovery of bovine spongiform encephalopathy, also known as BSE or mad cow disease, in a cow in the United States, we published an interim final rule banning certain cattle-derived materials from human food and cosmetics. These banned materials are considered to be high risk for transmitting the agent that causes this fatal disease from cows to humans. We also proposed recordkeeping requirements that complement the interim final rule. These records would aid in enforcing the prohibitions. Along with the Department of Agriculture, we published an advance notice of proposed rulemaking outlining other measures that could strengthen the nation against bovine spongiform encephalopathy. We concluded that it would be most protective to remove the "specified risk materials" most likely to contain the infectious agent from all animal feed and requested comment on this proposal. We are currently working on a proposal to assure the removal of these specified risk materials from feed. In addition, we are evaluating test methods for detecting prohibited protein in animal feed as an additional safeguard against the spread of this disease.

Priorities for Coming Year

Our priorities for the coming year include continued work to advance modernization of our good manufacturing practice requirements across several regulated product categories and to implement quality systems and risk-based prioritization in our field work planning. Specific areas of emphasis include:

- **Pharmaceutical quality.** Beginning in the fall of 2004, we will implement a risk model-based approach to targeting inspections of those facilities manufacturing drugs. We will refine this model over time to incorporate information about product and process understanding and quality management. At the same time, we will begin to apply risk-based principles to the product quality review process. We expect that these changes will not only allow but also facilitate continuous improvement in pharmaceutical manufacturing. This builds on work over the past two years that focused on assessing the current quality assurance systems, including some in effect for more than 25 years. We have found that in many cases, it is currently possible for manufacturers to develop robust processes that reliably produce high-quality products and that will accommodate process changes.
- **Tissue Safety.** We will finalize our regulatory framework for tissue safety, continue outreach to the tissue industry, and develop an interdisciplinary tissue safety team.
- **Food product safety.** We will propose guidance for modernizing Good Manufacturing Practices for food processing. The guidance will reflect our recently completed work applying science-driven standards and incorporating input from stakeholders. We will also issue a final rule on dietary supplement cGMPs. Additionally, we will finalize the interim final rule and the recordkeeping rule to prevent the spread of bovine spongiform encephalopathy.
- **Quality and safety of imports.** We are in the process of developing a strategic plan for inspection of imports and will issue this plan within the next 12 months. We expect the number of FDA-regulated imports to continue growing rapidly, further outpacing our ability to examine a large fraction of line entries.
- **Third-party inspection of medical device manufacturers.** We will issue industry guidance on requests for inspection by accredited persons to foster continued success for this program. This builds on this past year's work in which we established a program for third-party inspection of medical device manufacturing facilities. This included training qualified persons to perform these inspections.

PART 5: EMPOWERING CONSUMERS FOR BETTER HEALTH

While efficient risk management in government and in industry are critical to improving public health, the "final mile"—from the regulated marketplace to the actual consumer—is essential. We are seeking to address this final health mile by focusing on better information that enables consumers to make smarter, healthier choices about the foods and medical products they rely upon daily.

Progress Highlights

- Established a consumer communications infrastructure.
- Published a final regulation requiring the disclosure of trans fats in foods.
- Published guidance to improve the clarity and accuracy of medical product advertising aimed at consumers.
- Increased availability of our consumer educational materials through strategic leveraging with our stakeholders.

Priorities Highlights

- Implementing innovative solutions to combat obesity.
- Continuing our work with the Federal Trade Commission to ensure that dietary supplement product claims are backed up by adequate scientific evidence.
- Ensuring that industry promotes regulated products lawfully and accurately.

Background

We can help improve the health of the nation by encouraging the development of safer, more nutritious food and safer, effective, and more affordable pharmaceuticals and medical technologies, and by improving enforcement and regulatory protections for the public.

However, through their own choices, people can have an even greater impact on improving their health. For example, the total economic cost of obesity in the United States is about $117 billion per year, including more than $50 billion in avoidable medical costs. This is more than 5 percent of the total U.S. annual health care expenditures.[1] As more and more people become or remain overweight or obese, the long-term health and economic consequences will be astounding. About 400,000 people die each year because of being overweight, making lack of physical activity and poor diet second only to tobacco use as a cause of preventable death.[2]

Unfortunately, it is also the case that about half of the U.S. population is functionally illiterate or marginally literate. That is, they cannot read and understand adequately the written information needed to function in society.[3] Low literacy has also been recognized as a factor in increasing health care disparities and failing to take action to prevent disease.[4]

Low health literacy combined with the increasing incidence of chronic health problems like diabetes and obesity results in a serious public health problem. To fight these problems most effectively, it is more important than ever that consumers get information that is clear, informative, and effective in helping them improve or maintain their health. It is also more important than ever that consumers are aware of the dangers inherent in misleading information.

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Progress to Date

Over the past year, we have taken on the challenge and made major strides in improving the information that consumers and patients get about the products we regulate.

FDA consumer communications infrastructure

In 2003 and 2004, we completed a number of activities designed to develop an Agencywide consumer communications infrastructure:

- We completed a study of current communications processes and practices. This study identified prime areas for improvement and provided a baseline for measuring continuing progress.
- An Agencywide committee was established to help identify needed areas of research and to assist in disseminating results for integration into review and development of communication materials.

Research to improve industry communications about products we regulate

We conducted research to support review and development of industry communications about regulated products. For example:

- We completed the first phase of research to establish how best to present regulated product labeling in electronic formats.
- We also completed initial research to examine how accurately consumers understand messages that associate a specific nutrient with a specific disease or health outcome when the scientific support for the claimed relationship is uncertain.
- We made significant progress on consumer research related to one of our long-term goals—improving consumer understanding of the association between heart disease and different types of fats in foods. These include the harmful saturated fats and trans fats as well as the beneficial omega-3 fats.

Developing our own consumer education materials

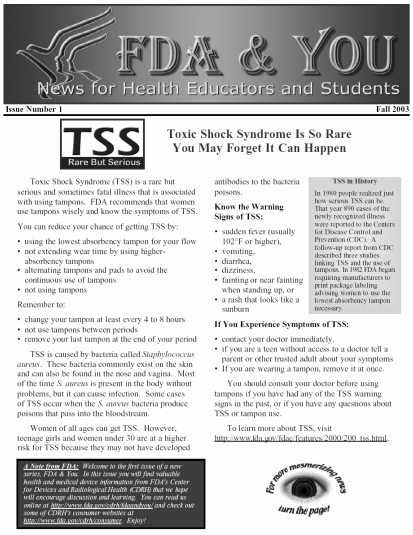
In addition to improving our regulation of information produced by manufacturers, we sought to strategically improve and increase FDA-initiated health benefit and risk information about the products we regulate and how best to use them. A number of our accomplishments involved educational materials development and outreach to improve consumer understanding and use of FDA-regulated products. Here are some examples:

- We developed a "heart health" Web site that pulls together all our Web-based information related to heart health and disease. It covers the basics and provides information about the entire range of FDA-regulated products related to maintaining a healthy heart and to diagnosing and treating heart disease (http://www.fda.gov/hearthealth/).

- Together with extensive publicity about our new rule requiring trans fat information to be included on food labels by January 2006, we developed an animated presentation to show consumers how this information will appear (http://www.cfsan.fda.gov/~dms/transfat.html). We also developed materials explaining the importance of this change, including the role of different fatty acids in health and disease (http://www.cfsan.fda.gov/~dms/qatrans2.html).

- We introduced a national education campaign to give consumers advice on how to safely use over-the-counter pain relief products like non-steroidal anti-inflammatory drugs (including aspirin and ibuprofen) and acetaminophen. The materials (http://www.fda.gov/cder/drug/analgesics/default.htm) focus on how important it is to know the active ingredients in over-the-counter pain relievers to avoid taking too much and possibly getting a serious side effect like liver injury or stomach bleeding.

- We developed a searchable database—Drugs@FDA—that includes information on approved prescription drugs, some over-the-counter drugs, and even discontinued drugs. This is the first resource to give the public comprehensive access to a drug product's approval history (http://www.accessdata.fda.gov/scripts/cder/drugsatfda/index.cfm).
- We updated our Breast Implant Consumer Handbook with the most recent four years of information (http://www.fda.gov/cdrh/breastimplants/).
- We launched a joint campaign with the Centers for Disease Control and Prevention to use the Internet, print and TV public service announcements and other materials to educate the public and healthcare providers on antimicrobial resistance. We also developed an animated presentation to educate key professional level stakeholders in the animal drug arena on how antimicrobial resistance develops and spreads.
- We developed and distributed information to middle school educators and students about tampons and toxic shock syndrome.
- In cooperation with other agencies and outside organizations, we developed and disseminated educational materials for women on a variety of relevant health topics, including use of hormone therapy during menopause, mammography, diabetes prevention, diagnosis and management, and safe medication use.
- We developed a training program for health educators to help teach food safety to pregnant women and women who might become pregnant. The program has a particular focus on safe food handling and education about the risks of methyl mercury in seafood and *Listeria monocytogenes* in refrigerated foods.
- Our Fight BAC campaign has been effective in changing consumer food preparation and storage practices.



FDA & YOU

News for Health Educators and Students

Issue Number 1 — Fall 2003

TSS

Rare But Serious

Toxic Shock Syndrome Is So Rare You May Forget It Can Happen

Toxic Shock Syndrome (TSS) is a rare but serious and sometimes fatal illness that is associated with using tampons. FDA recommends that women use tampons wisely and know the symptoms of TSS.

You can reduce your chance of getting TSS by:

- using the lowest absorbency tampon for your flow
- not extending wear time by using higher-absorbency tampons
- alternating tampons and pads to avoid the continuous use of tampons
- not using tampons

Remember to:

- change your tampon at least every 4 to 8 hours
- not use tampons between periods
- remove your last tampon at the end of your period

TSS is caused by bacteria called *Staphylococcus aureus*. These bacteria commonly exist on the skin and can also be found in the nose and vagina. Most of the time *S. aureus* is present in the body without problems, but it can cause infection. Some cases of TSS occur when the *S. aureus* bacteria produce poisons that pass into the bloodstream.

Women of all ages can get TSS. However, teenage girls and women under 30 are at a higher risk for TSS because they may not have developed antibodies to the bacteria poisons.

Know the Warning Signs of TSS:

- sudden fever (usually 102°F or higher),
- vomiting,
- diarrhea,
- dizziness,
- fainting or near fainting when standing up, or
- a rash that looks like a sunburn

If You Experience Symptoms of TSS:

- contact your doctor immediately.
- if you are a teen without access to a doctor tell a parent or other trusted adult about your symptoms
- If you are wearing a tampon, remove it at once.

You should consult your doctor before using tampons if you have had any of the TSS warning signs in the past, or if you have any questions about TSS or tampon use.

To learn more about TSS, visit http://www.fda.gov/fdac/features/2000/200_tss.html.

TSS in History

In 1980 people realized just how serious TSS can be. That year 890 cases of the newly recognized illness were reported to the Centers for Disease Control and Prevention (CDC). A follow-up report from CDC described three studies linking TSS and the use of tampons. In 1982 FDA began requiring manufacturers to print package labeling advising women to use the lowest absorbency tampon necessary.

A Note from FDA: Welcome to the first issue of a new series, FDA & You. In this issue you will find valuable health and medical device information from FDA's Center for Devices and Radiological Health (CDRH). But we hope will encourage discussion and learning. You can read us online at http://www.fda.gov/cdrh/kkomdyou; and check out some of CDRH's consumer websites at http://www.fda.gov/cdrh/yyaxxunree. Enjoy!

for more mesmerizing news turn the page!

Enhancing our efforts to ensure accurate, complete, nonmisleading communication

Clear information is critical to helping consumers make informed health-related choices. The industries we regulate issue a great deal of product information in the form of advertising and labeling. However, depending on how it is presented, information can be more or less understandable, and therefore more or less useful. In light of this need, we accomplished a number of activities to enhance our efforts to ensure that industry communications to the public—consumers and health care providers—are accurate, complete, and not misleading. Some examples include:

Information about foods and dietary supplements

- We published a regulation requiring that labels disclose the amount of trans fatty acids in foods and certain dietary supplements. We asked for comments about an option that would require trans fat information to be printed in a footnote to the food label and what form that disclosure should take.
- Under provisions of the Nutrition Labeling and Education Act of 1990, we allow food labels to carry unqualified claims about certain relationships between a dietary substance and disease or health-related condition when the relationship is supported by significant scientific agreement.
- We believe that the public should get more timely access to important information about nutrition and risk reduction at earlier stages of scientific knowledge, as long as that information is truthful and not misleading. Claims based on such knowledge, however, must be qualified so that consumers understand that they are not supported by definitive evidence. Thus, in 2003, we published interim guidance on a proposed rating system to characterize the strength of the scientific evidence that supports purported nutrient-disease relationships. In other interim guidance, we set out a process for FDA review of claims regarding these alleged relationships and how we believe manufacturers can communicate these qualified claims in a non-misleading way. We are currently conducting and analyzing research to determine the utility of such communication.

Information about medical products

- In recent years, an important new source of information about prescription drugs and certain medical devices has been direct-to-consumer advertising. For this information to be most helpful, our rules require that it include both benefits and risks. In 2004, we issued two draft guidance documents addressing such advertisements. One specified that we would treat TV and radio advertisements for restricted medical devices the same as such ads for prescription drugs. The other encouraged prescription drug manufacturers to use more understandable—and hence helpful—language and format to disclose the required risk information in the "brief summary" part of print advertisements.

Facilitating pediatric labeling

About 75 percent of all drugs prescribed for children are not tested for use with children. As a result they may be ineffective or even harmful.

In response to the Best Pharmaceuticals for Children's Act of 2002, we have increased distribution of important pediatric drug information news, including publishing in journals used by pediatricians and other general practice physicians, and expanding the information on our pediatric Web page (http://www.fda.gov/cder/pediatric/index.htm.)

Priorities for Coming Year

Although we have clearly made significant progress toward achieving the goal of empowering consumers, much remains to be done. Our priorities for the coming year include:

- **Collaboration with the Federal Trade Commission.** Some projects are ongoing, such as our continuing work with the Federal Trade Commission to take regulatory action against dietary supplement manufacturers who make product claims that are not backed up by adequate scientific evidence.
- **Dietary supplement guidance.** We will soon issue draft guidance for the dietary supplement industry that outlines the evidence that companies need to substantiate structure/function and certain other statements they may make about their products under current law. We have also recognized the need to target dietary supplement products containing misleading or false weight-loss claims.
- **Obesity.** It is important that we contribute in an appropriate manner to addressing the problem of obesity. The recommendations in our Calories Count report provide a start. We will continue to build on these recommendations. We have already contracted with the Keystone Center to design, convene, and facilitate a forum of stakeholders to seek consensus-based recommendations on specific aspects of the obesity problem. We are also planning to propose regulations and guidance for carbohydrate claims on food labels to help standardize the approach used to characterize the carbohydrate content of foods.
- **Food safety during pregnancy.** Our training manual to help educate pregnant women about food safety is only part of a larger initiative to target the entire health care community about what foods pregnant women should be consuming and what foods they should be avoiding. As with all public health agencies, FDA has a continuing responsibility to do everything possible to ensure the health of future generations.
- **Guidance on lawful, accurate product promotion.** Finally, we will continue to provide the guidance needed by regulated products industries so that they can promote their products lawfully and accurately.

PART 6: IMPROVING FDA'S BUSINESS PRACTICES

We are seeking to create a stronger, more unified Agency. The increasing complexity of our regulatory mission requires that we look for new ways to create efficiency, standardize processes, enhance infrastructure, and improve planning.

In particular, we will be undertaking a new business-process planning initiative to better track and enhance performance at all levels. Related to this, we are updating our financial management practices and systems to meet new federal standards, improve monitoring of funds, track program costs, and support resource allocation decisions.

Additionally, we are continuing to forge ahead on our White Oak consolidation effort and moving ever closer to our goal of a truly unified FDA.

Progress Highlights

- Implemented shared services, including consolidating information technology infrastructure.
- Developed a common business process model.
- Occupied our first building at our new White Oak campus.

Priorities Highlights

- Identifying best practices and future needs for information sharing among our components.
- Designing a common electronic gateway for the public to report adverse events about all the products we regulate.
- Expanding the use of structured product labeling beyond drugs and biologics to other medical products and foods.

Background

As our regulatory mission grows more complex, sustaining and advancing our performance requires becoming consistently more efficient, improving process management, enhancing infrastructure, and engaging in better planning and implementation of information technology.

Progress to Date

In the past year, we implemented significant management reforms that have given increased attention to Agencywide business process analysis and planning and have reshaped the delivery of administrative support services to operating components. The administrative changes have been accomplished through:

- Implementing a shared services organization.
- Competing commercial functions to obtain further efficiency.
- Reorganizing information technology resources to support our mission and goals.
- Improving our financial management practices and systems to meet updated federal standards, improve monitoring of funds, track program costs, and support resource allocation decisions.

Business process planning

Many of our processes cut across organizational lines. Automating them requires that we establish process continuity, standardization, and consolidation. Therefore, during the past year our Management Council established a high-level business process planning group. It will be the principal developer of common Agency business processes and associated system capabilities. Business process planning will allow us to:

- Eliminate duplication of common systems.
- Expand support for common and special needs.
- Allocate information technology funds more efficiently.

We have developed a common business process model that will be used to help articulate our mission-critical activities and ultimately will help develop a common, strategically aligned information technology infrastructure.

Information technology

Fiscal year 2004 saw the creation of a broad-based information technology organization through:

- Consolidating information technology infrastructure service.
- Realigning formal information technology offices in the centers, field, and headquarters so that they directly report to the Agency chief information officer.
- Reorganizing the office of the chief information officer, enabling it to provide a more strategic focus.

We also began work to define a roadmap for better aligning key technologies to our policy goals and objectives. The final result will be the integration of enterprise architecture, capital planning and investment management, and project management into a more comprehensive investment review and governance process for information technology. In addition, the information technology community enlarged its presence in the user community by improving its support of electronic submission standards and scientific computing support.

The Agencywide consolidation will enable the transition of information technology into a strategic tool for realizing our policy goals and objectives, while allowing reductions in total spending. To accomplish this difficult objective, investments will be driven by business planning from an Agencywide perspective. Previously, we had made most systems investments at the center level, including investments for new applications development and maintenance. There had been relatively little coordination of these investments across our components. In addition, the cost versus benefit of these systems had not been fully documented. However, this information will be critical to the successful transition to consolidated systems and a well-coordinated approach to investment and management in the next year and beyond.

Shared services

We have redesigned the way we deliver administrative services using a shared services model. This provides for the efficient realignment of administrative resources to a centralized organization without jeopardizing our mission. The shared services model has been shown to more effectively provide services in a way that maintains close ties to customers through standardization and demand management to achieve efficiency. The portfolio of services is aligned with customer needs and includes transactional services, products and information, and specialized services tailored to fit specific customer segments.

Over the past year, we successfully implemented shared services for our headquarters and our centers. Shared services for our field components and our National Center for Toxicological Research will be completed by October 2004.

Financial management

We received our sixth consecutive "unqualified," or clean, audit opinion on our financial statements from the Department's Office of the Inspector General in January 2004. This unparalleled achievement reflects our ability to produce creditable financial statements in a timely manner despite the fact that our existing financial systems are not fully compliant with today's financial standards.

The investments we are making in our financial management systems will allow us to become compliant with financial management laws and regulations as well as provide enhanced capability to track revenues and costs, forecast budget estimates, and support smarter resource decision-making.

In fiscal year 2004, we entered into the developmental phase of the Unified Financial Management System project. This entailed specific preparatory work that included ensuring software meets our needs, system testing, determining user training needs, and performing data clean-up. Under our Financial Enterprise Solutions projects, we are developing financial applications that will be fully integrated into the Unified Financial Management System.

This integrated financial management system will support:

- Our user fee programs.
- Acquisition of goods and services.
- The cash in-kind sponsored travel program.
- Cost management.

Competitive sourcing

As a result of competitive sourcing, we will recognize a five-year savings of $16.4 million. Competitive sourcing gives federal agencies the opportunity to become more efficient by studying commercial activities. These are products or services that could be obtained from a private-sector source but are being performed by government employees. The government revises its in-house organization performing the commercial activity to capture efficiencies. This becomes the government's most efficient organization or "proposal." The government proposal competes with proposed performance offered by the private sector or another government agency. Competitive sourcing is intended to infuse innovation, cost savings and greater effectiveness in federal agencies.

Our annual goals for competitive sourcing were derived from the number of positions identified as performing commercial activities in our 2001 report mandated by the Federal Activities Inventory Reform Act of 1998. In 2001, we reported that employees in 1,454 positions perform commercial activities.

In fiscal years 2002 and 2003, our proposals won the competitions for all six of the commercial activities studied:

- Graphic arts and visual information services.
- Television studio services.
- Library services.
- Facilities and real property management services.
- General accounting services for our field operations.
- Biological technician and physical science technician services.

In fiscal years 2004 and 2005, we are competing select clerical positions that provide administrative support across the Agency.

White Oak campus

Our employees in Washington, D.C., and nearby areas are currently located in 40 leased facilities. We are working with the General Services Administration to move our headquarters and medical products operations to a consolidated, government-owned campus at White Oak in suburban Maryland. The development will consist of new state-of-the-art laboratories, office buildings and support facilities. The White Oak consolidation will allow us to:

- Standardize and modernize document handling.
- Use shared facilities such as libraries and conference areas.
- Reduce redundancies in a wide range of administrative and management tasks.
- Allow conversion to a single computer architecture and network.

This will reduce operating costs, cut travel time between organizations for our employees, and make it more convenient for the public to do business with us.

We continued our coordinated efforts to execute the 2000 master plan at White Oak. In December 2003, we held a dedication ceremony for the Life Sciences Laboratory, a state-of-the-art chemistry and animal research facility. As the first new building to open on the site, the laboratory is occupied by 120 employees from the Center for Drug Evaluation and Research and the Center for Devices and Radiological Health.

Construction continued on an office building which will accommodate approximately 1,700 employees from CDER, as well as a modern document storage center and mail room. This building is scheduled to open in spring 2005. Design and planning is completed for the CDRH Engineering/Physics Laboratory and the Central Shared Use Building.

Priorities for Coming Year

In the coming year, our business process planning efforts will focus on the following priority areas, spanning our major regulatory business functions in premarket product review, post-market safety surveillance, and key managerial support functions.

Premarket review of new technology

- **Structured product label.** Over the past year, we completed the first phase of research to establish how best to represent regulated product labeling in electronic formats. In the coming year, we will convene a workgroup of Agency experts in premarket review and patient safety to examine ways to broaden the application of standards and technology currently used for human drug and biologic products to other products we regulate such as medical devices and foods.

Patient and consumer safety

- **FDA Adverse Event Reporting System (FAERS).** To improve our post-market safety surveillance, we are convening a senior cross-Agency working group to analyze current adverse event and consumer complaint reporting processes and systems. We want to design one common electronic gateway that can be used as a single point of entry for all reporting of adverse events by the public, including patients, consumers, and health care providers.

Managerial Support

- **Correspondence tracking.** To enhance our responsiveness to citizens and stakeholders, we will be replacing our current patchwork of correspondence tracking systems with a common platform and a harmonized process. This effort begins in the coming year with a pilot using a common platform tracking system and a cross-Agency process to identify best practices in this area.
- **Activity-based management and costing.** To support our ability to allocate scarce resources to perform mission-critical functions most effectively, we are implementing an activity-based management system. In the coming year, we will conduct training to develop effective methods for activity management and cost-driver selection. We will also develop a plan for identifying management and cost drivers. These are the critical first steps in designing a practical, high-quality activity-based management and cost system.

- **Operational efficiencies.** We will increase operational efficiencies and achieve managerial excellence through:
  - Completing implementation of the Unified Financial Management System.
  - Enhancing our shared services operations by identifying business process improvements across the entire organization, monitoring and updating service-level agreements, and identifying additional services and functions for inclusion in shared services.
  - Performing additional competitive sourcing to maximize cost-effective performance of functions.
  - Overseeing the construction at the White Oak campus of the Central Shared Use Building and the Engineering/Physics Laboratory.

WHERE TO FIND MORE INFORMATION

U.S. Food and Drug Administration

- **Home page:** http://www.fda.gov/
- **About FDA:** http://www.fda.gov/opacom/hpview.html
- ***FDA Consumer* magazine**: http://www.fda.gov/fdac/fdacindex.html

Center for Food Safety and Applied Nutrition

- http://www.cfsan.fda.gov/list.html

Center for Drug Evaluation and Research

- http://www.fda.gov/cder/index.html

Center for Biologics Evaluation and Research

- http://www.fda.gov/cber/index.html

Center for Devices and Radiological Health

- http://www.fda.gov/cdrh/index.html

Center for Veterinary Medicine

- http://www.fda.gov/cvm/default.html

Field Operations and Regulatory Affairs

- http://www.fda.gov/ora/

National Center for Toxicological Research

- http://www.fda.gov/nctr/index.html

Prescription Drug User Fee Act performance reports

- http://www.fda.gov/oc/pdufa/default.htm

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