

An Emerging Role of Regulatory Affairs in the Drug Development Process

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ABSTRACT:

In the pharmaceutical industry, developing a novel chemical which have a significant negative influence possess to ensure the quality, safety, and effectiveness to maintaining all records and papers as well as keeping products in conformity are entirely the regulatory affairs professional's responsibilities. Although the road to drug registration and marketing approval is paved with good intentions, it can be challenging, drug development and commercialization are highly regulated industries evolving the CFR. Code of Federal Regulations (CFR) is the codification of the general and permanent rules and regulations (sometimes called administrative law) published in the Federal Register by the executive departments and agencies of the federal government of the United States. It is divided into 50 titles. Each title is further divided into chapters, subchapters, parts, and sections. Many in the Regulatory Affairs Profession believe the New Approach to regulation will eventually be adopted for all healthcare products as it represents the best model for delivering new healthcare advances to market in a reasonable time with acceptable safety. Regulatory Affairs department is constantly evolving and growing and is the one which is least impacted during the Acquisition and Merger, and also during recession.

I. INTRODUCTION

The global pharmaceutical business and drug regulatory authorities are connected via the regulatory affairs (RA) profession. Prior to being marketed, drug goods must first be registered in the appropriate countries. The organizational structure of pharmaceutical businesses include the drug regulatory affairs department, which is significant. The pharmaceutical industry is well-organized, systematic, and adheres to worldwide regulatory requirements for the production of medical equipment, traditional herbal

items, cosmetics, and chemical and biological medications for human and veterinary consumption (1). Every part of the process, from formulating regulatory strategies after the discovery of a new chemical entity to organizing postmarketing activities, benefits from the expertise of the drug regulatory affairs professional.

(2) In the pharmaceutical industry, developing a novel chemical can cost millions of dollars or rupees, and any mistakes have a significant negative influence on a company's reputation. Medicine laws are necessary to ensure the quality, safety, and effectiveness of medications because they are so important to human health. Maintaining all records and papers as well as keeping products in conformity are entirely the regulatory affairs professional's responsibilities. Any oversight in the regulatory, quality control, or safety-related processes could result in the recall of the product and the consequent loss of millions of dollars. All facets of drug development, from research to commercialization, are very regulated. Clinical trials are required for every drug before it can be approved for sale in order to guarantee its quality, safety, and efficacy. (3)

OBJECTIVE:

Examine the administrative issues calling and the requirement for drug guideline Give an outline of a few Regulatory Authorities Identify key improvement achievements that initiate FDA collaboration Discuss the various jobs and capability inside Regulatory Affairs Highlights the worth of drug specialists in Regulatory Affairs jobs.

- To research position in regulatory affairs for the pharmacy industry
- The provision of fundamentals in the area of regulatory affairs in accordance with industry requirements



- Keeping up with the region's constantly evolving legal landscape application in the different stages of growth, current understanding of international rules and regulations
- theoretical expertise in creating and submitting the documents that the healthcare business and regulatory authorities require for the registration of professionals

WHY IS REGULATORY AFFAIRS NEEDED?

Although the road to drug registration and marketing approval is paved with good intentions, it can be challenging, drug development and commercialization are highly regulated industries. Things are continually evolving.

PARAMETER OF REGULATORY AFFAIRS:

- Development Design Plan Co-ordination Writing/reviewing supervising
- Drug regulation
- National Laws (e.g., UK- Medicines Act, US-CFR)

- Regional Laws (EC directives)
- Construction Assembling & Submission Management Testing Where are the weaknesses
- National and Regional Guidelines
- International Guidelines (ICH)

SCOPE OF REGULATORY AFFAIRS PROFESSION IN INDUSTRIES:

- Professionals in regulatory affairs work in academia, government regulatory agencies, and industry. The many regulatory experts work in various fields.

REGULATORY AUTHORITY

Drug administrative specialists and drug makers share a shared objective: to advance the general wellbeing by guaranteeing that protected, compelling, appropriately named drug items, fabricated to exclusive requirements of value are created, tried, assessed, and endorsed for showcasing in the base measure of time. (4)

REGULATORY BODIES IN THE WORLD (2):

COUNTRY	REGULATORY AUTHORITY
India	Central Drugs Standard Control Organization Drug controller general of India (DCGI)
US	Food and Drug Administration (USFDA)
UK	Medicines and Health care products regulatory Agency (MHRA)
Australia	Therapeutic Goods Administration (TGA)
Japan	Japanese Ministry of Health, Labour and Welfare (MHLW)
Canada	Health Canada
Brazil	Agency National degradation Vigilancia Sanitaria (ANVISA)
South Africa	Medicines Control Council (MCC)
Europe	European Directorate for Quality of Medicines (EDQM) European Medicines Evaluation agencies (EMA)

DISTRIBUTION OF REGULATORY FUNCTIONS ALONG THE DRUG PRODUCT LIFE CYCLE:

CLINICAL TRIALS:

- Applications online in the clinical trials registry India
- Approval of applications
- Good clinical practice
- Inspections
- Registrations of ethics committee
- Serious adverse events (SAE)

Authority Responsible: CDSCO (appointed by the MOHFW, Central Government.) has the sole responsibility – relies on expert committees.

NEW DRUG APPROVALS:

- 12 subject expert committees (SECs) for deliberation on new drug application for grant of marketing license
- Import of new drugs (Registration of foreign manufacture of foreign ma

Manufacturers and grant of license to import)
Authority Responsible: CDSCO has the sole responsibility

MANUFACTURING:

- Application for License to manufacture (Generics and those with marketing license)
- Inspection of Good Manufacturing Practices (WHO GMP/Schedule M)
- Grant of License to Manufacture
- Collection of Samples, testing and prosecution for Non-compliance

Authority Responsible: SDR (appointed by the Department of Health, State Government) has primary responsibility
Exceptions (CDSCO competence) - CDSCO acts as SDR in Union Territories (e.g. Delhi) - WHO-GMP Inspections - High Risk Products (IV Fluids, Large volume parenteral, Vaccine and Sera, Blood and Blood Products, r-DNA products (CDSCO may include new products in this list via notification)

DISTRIBUTION AND SALE:

- Application for License to distribute and sell
- Inspection of Good Distribution Practices (GDP) and sale premises
- Grant of License to distribute and sell
- Prosecution for Non-Compliance

Authority Responsible: SDR has the sole responsibility

POSTMARKETING SURVEILLANCE:

- Periodic Safety Update Reports (PSURs) required to be submitted (Schedule Y of the Drugs and Cosmetics Rules) for new drugs granted marketing license
- Banning of Drugs considered harmful

or subtherapeutic under Sec. 26A of the DCA

- Pharmacovigilance Programme of India (PvPI) is the national coordinating center for collecting Adverse Drug Reaction Reports from Adverse Drug Monitoring Centre (AMCs)

Authority Responsible: CDSCO has sole responsibility for PSURs and Indian Pharmacopoeia Commission (IPC) is in charge of coordinating Adverse Drug Reports (ADRs). (13)

NEW DRUG ADMINISTRATION:

Model-based drug improvement supported by Lewis Sheiner, in which pharmacostatistical models of medication viability and well-being are created from preclinical and accessible clinical information, offers a quantitative way to deal with further developing medication advancement and advancement navigation. (5)

NEW DRUG APPLICATION PROCESS:

The process starts with preclinical testing. For drug that appears safe, an investigational new drug application is filed with the FDA. If approved, clinical trials begin with;

- Phase I** studies that focus on safety and pharmacology
- Phase II** studies examine the effectiveness of the compound.
- Phase III** before submitting a new drug application (NDA) to the FDA, is the last step. An NDA includes all the data gathered throughout all testing grounds.
- Phase IV** Studies are carried out following the approval of a product (post marketing studies). The approval process has been simplified as a result of recent legislative changes. (6)

Drugdevelopment/Approval:

BasicResearchandtargetDiscovery



DrugDiscovery



Pre-ClinicalTesting

INDsubmission&ReviewbyFDA



ClinicalTrialsphaseI,II,III,IV



NDAsubmission&ReviewbyFDA



FoodDrugAdministrationApprovalManufacturing/Marketing

ABBREVIATEDNEWDRUGAPPLICATION:

Abbreviated New Drug Application (ANDA) must have information to show that the proposed generic product and the innovator product are both pharmaceutically equivalent and bioequivalent, and therefore, therapeutically equivalent

INVESTIGATIONALNEWDRUG:

An Investigational New Drug (IND) treatment program allows patients access to a drug that has shown activity against a serious or life-threatening disease prior to full Food and Drug Administration (FDA) review and approval. This treatment IND program, in which patients with locally advanced or metastatic pancreatic

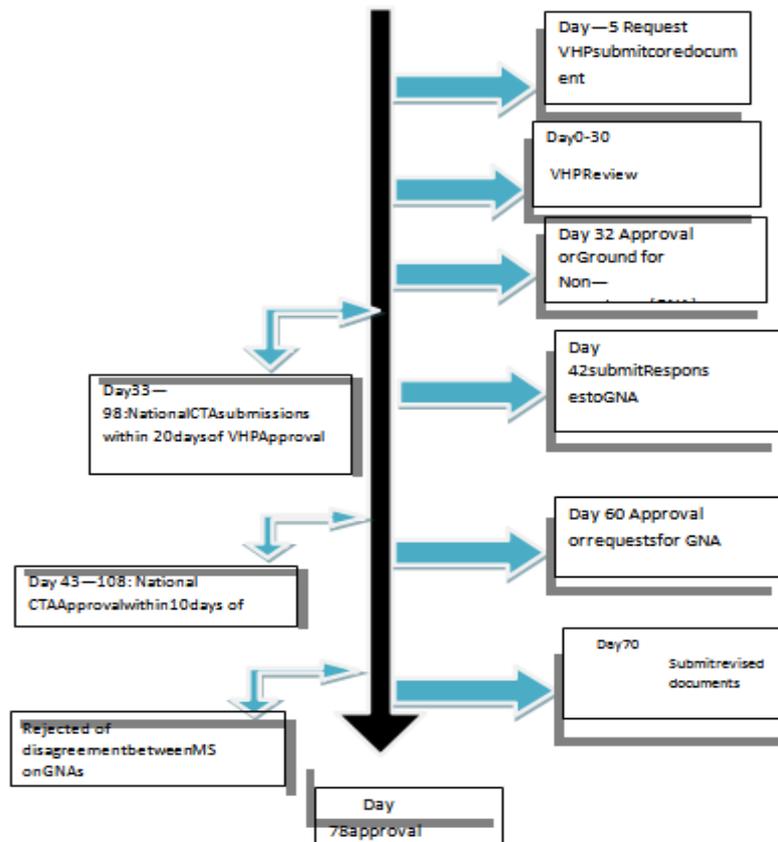
carcinoma were treated with gemcitabine, began in 1995

The Federal Food, Drug and Cosmetic Act prohibits the shipment of a new drug into interstate commerce unless there exists for that drug an approved NDA or an effective IND application. Unlike certain European countries, such as Germany and the United Kingdom, the existence of an IND is required regardless of the proposed phase of clinical trial. Thus, even phase I trials to be conducted in the United States on volunteer subjects require the prior submission of an IND before that trial may be undertaken. An Investigational New Drug (IND) treatment program allows patients access to a drug that has shown activity against a serious or life-threatening disease prior to full Food and Drug Administration (FDA) review and approval. This treatment IND program, in which patients with locally advanced or

metastatic pancreatic carcinoma were treated with gemcitabine, (7)

MEDICAL DEVICE (CTD):

The Common Technical Document (CTD) is a bunch of particular for application dossier for the enlistment of Prescriptions and ready to be utilized across Europe, Japan and the Unified States. It is a universally concurred design for the arrangement of uses in regards to new drugs planned to be submitted to local experts in the nations. It was created by the European Medicines Agency (EMA, Europe), the Food and drug administration (FDA, U.S.) and the Service of Wellbeing, Work and Government assistance (Japan). The CTD is kept up with by the Worldwide Meeting on Harmonization of Specialized Prerequisites for Enlistment of Drugs for Human Use (ICH). (13)



CODE OF FEDERAL REGULATIONS (CFR):

Code of Federal Regulations (CFR) is the codification of the general and permanent rules and regulations (sometimes called administrative law) published in the Federal Register by the executive departments and agencies of the federal

government of the United States. The CFR is divided into 50 titles that represent broad areas subject to federal regulations. Each title is further divided into chapters, subchapters, parts, and sections. The online CFR is a joint project authorized by the publisher, the National Archives and Records



Administration's (NARA) Office of the Federal Register (OFR), and the Government Publishing Office (GPO) to provide the public with enhanced access to Government information.

“The Code of Federal Regulations (CFR) annual edition is the codification of the general and permanent rules published in the Federal Register by the departments and agencies of the Federal Government.”

It is divided into three chapters:

VOLUME I - Food and Drug Administration

VOLUME II - Office of National Drug Control Policy

VOLUME III - Drug Enforcement Administration

PARTS:

PART 1-General Provisions
PART 2-Grants and Agreements
PART 3-The President
PART 4-Accounts
PART 5-Administrative Personnel
PART 6-Domestic Security
PART 7-Agriculture
PART 8-Aliens and Nationality
PART 9-Animals and Animal Products
PART 10-Energy
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PART 14-Aeronautics and Space
PART 15-Commerce and Foreign Trade
PART 16-Commercial Practices
PART 17-Commodity and Securities Exchanges
PART 18-Conservation of Power and Water Resources
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PART 20-Employees' Benefits
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PART 23-Highways
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PART 26-Internal Revenue
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PART 29-Labor
PART 30-Mineral Resources
PART 31-Money and Finance: Treasury
PART 32-National Defense
PART 33-Navigation and Navigable Waters
PART 34-Education
PART 35-Panama Canal [Reserve]
PART 36-Parks, Forests, and Public Property
PART 37- Patents, Trademarks, and Copyrights
PART 38-

Pensions, Bonuses, and Veterans' Relief
PART 39-Postal Service

PART 40-Protection of Environment

PART 41- Public Contracts and Property Management
PART 42-Public Health

PART 43-Public Lands: Interior

PART 44-

Emergency Management and Assistance
PART 45-Public Welfare

PART 46-Shipping

PART 47-Telecommunication

PART 48-

Federal Acquisition Regulations System
PART 49-Transportation

PART 50-Wildlife and Fisheries (8)

VOLUME I: THE FOOD AND DRUG ADMINISTRATION INTRODUCTION:

The Food and Drug Administration (FDA) is responsible for the regulation of the pharmaceutical industry in the interest of protecting public health. The aim of this review was to outline the evolution and current role of the FDA in the development and approval of new drugs. Additionally, we describe current assessments of proarrhythmic risk to illustrate recent FDA initiatives intended to harness information technology to modernize the regulatory process. In order to identify the literature required to produce this review, search tools such as PubMed and Google Scholar were used to locate relevant web pages and articles.

The job of the FDA is not only to ensure that high standards for drug efficacy and safety are applied to products available to American consumers and patients but also to balance the lengthy, costly process of maintaining these standards against the pressure to provide access to effective treatment earlier and without surplus expenditures. In order to provide expedited access to the newest effective therapies for critically ill patients in the safest way possible, the FDA has developed several accelerated pathways to fast-track drug approval. Through partnerships with industry and academic institutions, research is being conducted into how information technology can be integrated into the drug development process to improve its cost-effectiveness.

ORGANISATION:

Until the early 1900s, drug products were able to be sold with false labels describing unregulated ingredients as well as unsubstantiated claims about their therapeutic merit. In 1906,

Congress passed the first major consumer protection law called the Pure Food and Drug Act, which prohibited the interstate sale of misbranded food and drugs with regard to their ingredients and purity. This was followed in 1912 by the Sherley Amendment, which outlawed the labeling of drugs with false therapeutic claims. These laws were enforced by the Bureau of Chemistry in the Department of Agriculture, which became the FDA in 1930.

The next major landmark in drug regulation came in 1938, when the Food, Drug, and Cosmetic (FD&C) Act was passed. This was prompted by the events of 1937, during which 105 people died as a result of taking elixir sulfanilamide. A Tennessee drug company, S.E. Massengill Co., developed the drug by formulating sulfanilamide, the first sulfa antimicrobial, with diethylene glycol in order to produce a liquid form of the antibiotic. However, diethylene glycol, a derivative of ethylene glycol, which is now used in antifreeze formulations, is toxic to humans and causes metabolic acidosis, nephrotoxicity, and neurotoxicity. The subsequent public outcry led to the passage of the FD&C Act, which included many new provisions focused on ensuring that a drug's safety was established prior to a product being released on the market.

The next major enactment came in 1962, when the Kefauver-Harris Amendment was passed. This bill required drug manufacturers to prove that their product was both effective and safe, prior to release on the market, and to report any adverse effects observed during the post marketing period to the FDA. It also stipulated that the drug's effectiveness be demonstrated in well-controlled clinical trials and that the patients in those trials must provide informed consent prior to their inclusion. Additionally, it allowed the FDA to control prescription drug advertising in order to ensure the accurate reporting of side effects. This amendment enabled the FDA to require "adequate and well-controlled investigations" demonstrating substantial evidence of efficacy¹¹ and established the blueprint for conducting randomized controlled trials, which remain the benchmark for demonstrating drug efficacy and safety today.

In 1983, the Orphan Drug Act was passed and provided incentives like market exclusivity and tax credits to promote the development of drugs aimed at treating rare diseases. Similar legislation has since been adopted in Japan and the European

Union.

In 1992, the Prescription Drug User Fee Act was passed by Congress. This allows the CDER

to collect fees from drug companies to be used to boost the resources committed toward the approval process of a specific drug. In return, agreed stages of the approval process must be completed by deadlines determined at the time at which the fee is collected. This procedure helps the FDA to bring drugs to the market in a timely fashion without sacrificing the careful review process.

In 1998, the Adverse Event Reporting System (AERS) was introduced to enhance post marketing surveillance. This online database allows for the reporting of adverse effects of drugs identified by patients or prescribers.

In 2000, the ClinicalTrials.gov website was made available to the public. This was mandated by the 1997 FDA Modernization Act, which required the National Institutes of Health (NIH) to improve public access to information about ongoing clinical trials. This database registers all efficacy trials conducted under an investigational new drug (IND) designation.

The FDA Amendments Act of 2007 broadened and updated several previously enacted laws. This included expanding post marketing safety activities by upgrading the AERS database and analytical tools and creating the Risk Evaluation and Mitigation Strategies (REMS) program. This program is intended to mitigate risk by allowing the FDA to require drug manufacturers to introduce additional safety provisions when the FDA has concerns about a particularly serious adverse event for a specific drug. Examples of REMS stipulations include the completion of a mandatory preadministration laboratory test if it is expected to predict the risk of an adverse event or the mandatory immediate availability of a certain treatment at the facility where a drug is being administered.

In May 2018, the Right to Try Act was signed into federal law. This allows physicians to apply for expanded access to drugs that have completed a phase I trial but which have not yet been approved by the FDA for market entrance. This law allows patients to bypass FDA approval in the pursuit of expanded access.⁽¹⁵⁾

VOLUME II: OFFICE OF NATIONAL DRUG CONTROL POLICY (ONDCP)

The Office of National Drug Control Policy (ONDCP) is responsible for creating,

implementing, and evaluating U.S. drug control policies to reduce the use, manufacturing, and trafficking of illicit drugs as well as drug-related health consequences, crime, and violence.

ONDCP is located in the Executive Office of the President. It was created by the Anti-Drug Abuse Act of 1988 and most recently reauthorized by the Office of National Drug Control Policy Reauthorization Act of 2006. Authorization of appropriations for ONDCP expired at the end of FY2010, but it continues to receive funding. The ONDCP director must develop a National Drug Control Strategy (Strategy) to direct the nation's anti-drug efforts— and a companion National Drug Control Budget (Budget)— and evaluate the implementation of the Strategy by agencies contributing to the Federal Drug Control Program and the outcomes (reducing illicit drug use and its consequences). In addition, ONDCP manages the High Intensity Drug Trafficking Areas (HIDTA) program and other programs, including Drug-Free Communities (DFC). (14)

VOLUME III: DRUG ENFORCEMENT ADMINISTRATION “DEPARTMENT OF JUSTICE”

The mission of DEA is to enforce the controlled substances laws and regulations of the United States of America and to bring to the criminal and civil justice system of the United States or any other competent jurisdiction those organizations, and principal members of organizations, involved in the growing, manufacture, or distribution of controlled substances appearing in or destined for illicit traffic in the United States; and to recommend and support non-enforcement programs aimed at reducing the availability of illicit controlled substances on the domestic and international markets.

In carrying out its mission, DEA is the lead agency responsible for the development of overall Federal drug enforcement strategy, programs, planning, and evaluation. DEA's primary responsibilities include:

1. Investigation and preparation for prosecution of major violators of controlled substances laws operating at interstate and international levels in keeping with established drug priority goals;
2. Management of a national narcotics intelligence system in cooperation with Federal, State, local and foreign officials to collect,

analyze, and disseminate strategic and operational intelligence information;

3. Seizure and forfeiture of assets derived from, traceable to, or intended to be used for illicit drug trafficking;
4. Enforcement of the provisions of the Controlled Substances Act as they pertain to the manufacture, distribution, and dispensing of legally produced controlled substances;
5. Coordination and cooperation with Federal, State and local law enforcement officials on mutual drug enforcement efforts and enhancement of such efforts through exploitation of potential interstate and international investigations beyond local or limited Federal jurisdictions and resources;
6. Coordination and cooperation with other Federal, State, and local agencies, and with foreign governments, in programs designed to reduce the availability of illicit abuse-type drugs on the United States market through non-enforcement methods such as crop eradication; crop substitution, and training of foreign officials.
7. Responsibility, under the policy guidance of the Secretary of State and U.S. Ambassadors, for all programs associated with drug law enforcement counterparts in foreign countries; and
8. Liaison with the United Nations, INTERPOL, and other organizations on matters relating to international narcotics control programs. (10)

DRUG SCHEDULING:

Drug scheduling became mandated under The Federal Comprehensive Drug Abuse Prevention and Control Act of 1970 (also known as the Controlled Substances Act). The law addresses controlled substances within Title II. Based upon this law, the United States Drug Enforcement Agency (DEA) maintains a list of controlled medications and illicit substances that are categorized from scheduled I to V. The five categories have their basis on the medication's proper and beneficial medical use and the medication's potential for dependency and abuse. The purpose of the law is to provide government oversight over the manufacturing and distribution of these types of substances. Prescribers and dispensers are required to have a DEA license to supply these drugs. The licensing provides links to

users, prescribers, and distributor.

Issues of concern:

The schedules range from Schedule I to V. Schedule I drugs are considered to have the highest risk of abuse while Schedule V drugs have the lowest potential for abuse. Other factors considered by the DEA include pharmacological effect, evidenced-based knowledge of the drug, risk to public health, trends in the use of the drug, and whether or not the drug has the potential to be made more dangerous with minor chemical modifications.

Schedule I:

"High abuse potential with no accepted medical use; medications within this schedule may not be prescribed, dispensed, or administered" [1]
 Examples of include marijuana (cannabis), heroin, mescaline (peyote), lysergic acid diethylamide (LSD), methylenedioxymethamphetamine (MDMA), and meperidine.

Schedule II:

"High abuse potential with severe psychological or physical dependence; however, these medications have an accepted medical use and may be prescribed, dispensed, or administered" [1]
 Examples include fentanyl, oxycodone, morphine, methylphenidate, hydromorphone, amphetamine, methamphetamine (meth), pentobarbital, and secobarbital. Schedule II drugs may not receive a refill at the pharmacy.

Schedule III:

"Intermediate abuse potential (i.e., less than Schedule II but more than Schedule IV medications) examples include anabolic steroids, testosterone, and ketamine

Schedule IV:

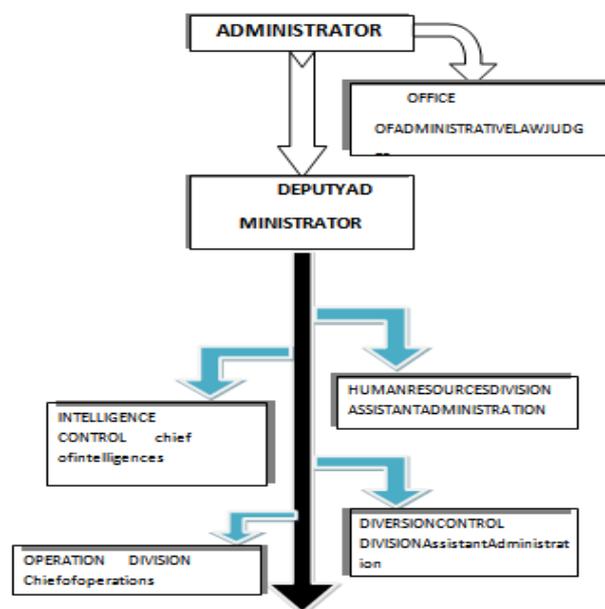
"Abuse potential less than Schedule II but more than Schedule V medications" examples include diazepam, Alprazolam, and Tramadol

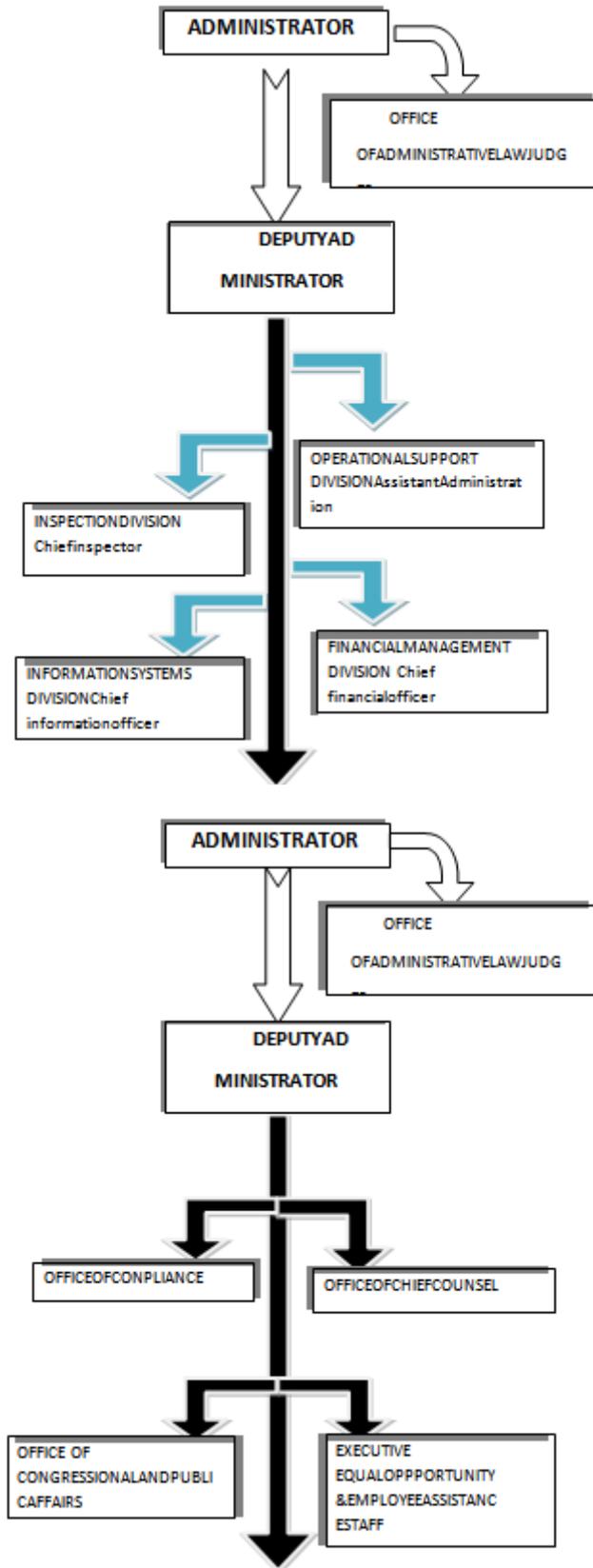
Schedule V:

"Medications with the least potential for abuse among controlled substances." Examples include Pregabalin, Diphenoxylate/Atropine, Dextromethorphan (9)

Enforcement Trends:

Trends in federal drug enforcement may reflect changes in the nation's drug problems and changes in the federal response to these problems. These trends also may reflect the federal government's enforcement priorities. For example, as shown in Figure 4, the number of drug cases filed by U.S. Attorneys steadily increased in the late 1990s and early 2000s. While this may reflect a higher drug crime incidence rate, it also may reflect a federal enforcement focus on drug crimes. This section provides a snapshot of federal enforcement trends over the last several decades.





Federal Drug Arrests and Seizures

Arrests:

Most drug arrests are made by state and local law enforcement, and most of these arrests are for possession rather than sale or manufacturing.¹³⁰ In contrast, most federal drug arrests are for trafficking offenses rather than possession.¹³¹ While multiple federal agencies (as previously identified in this report) engage in federal drug enforcement, the DEA is the primary federal agency responsible for the enforcement of federal drug laws; therefore, it is the agency of focus in this section.⁽¹¹⁾

THE RISK OF ACTION BY THE DRUG ENFORCEMENT ADMINISTRATION AGAINST PHYSICIANS PRESCRIBING OPIOIDS FOR PAIN INTRODUCTION:

The under treatment of pain has been well documented and barriers to improving the treatment have been described. Fear of governmental actions against doctors for prescribing opioids for treatment of pain is one of the barriers. A study of state medical board actions against physicians who prescribe opioids for patients in pain found that this fear of state medical board actions is exaggerated. The actual risk of an American physician being disciplined by a state medical board for treating a real patient with opioids for a painful medical condition is virtually nonexistent. In addition to fear of state medical boards, physicians fear an investigation or action by the federal Drug Enforcement Administration (DEA). The present study was conducted to determine the risk of an action by the DEA against a physician for prescribing opioids for patients in pain.

ACTION TAKEN BY DEA:

Forty-seven doctors were arrested by the DEA in 2003. The alleged violations leading to the arrests are summarized below. Examples provided by the DEA are:

- Prescriptions in exchange for sex: Wrote prescriptions for female members of motor cycle gangs in exchange for sex.
- Prescriptions for money: Wrote prescriptions for money in dressing rooms of adult night clubs.
- Prescriptions for personal use: Used DEA registration to write fraudulent prescriptions in other individual names for own personal use.
- Internet prescribing: Wrote prescriptions for patients without medical examination and for drugs specifically requested by patient on the Internet.

- No license or DEA number: Wrote prescriptions after state license was suspended.
- Fraudulent prescriptions: Used DEA registration of fraudulently obtained drugs from wholesalers.
- Prescribed for addicts or undercover agents: Wrote prescription to undercover agents in exchange for money.

Many of the cases in this summary did not cite the drugs involved but only “controlled substance” so we could not ascertain whether opioids were the principal drugs in these cases. Others list multiple drugs including an opioid. The allegations in the case notes supplied were sufficient for us to think that 37 doctors were prescribing opioids outside of the acceptable practice of medicine or for their own personal use. Other case notes were too brief for us to independently determine whether any of these cases represented actual medical practice. Six were undercover buys, often multiple times for each doctor, one was for prescribing for drug abusers with 10 deaths resulting from the prescribed drugs, one was for prescribing a controlled substance after DEA registration was suspended, and two were for unlawful distribution of a controlled substance.

The Federal Register cases for 2003 and 2004 included 56 physicians who had their DEA Certificates of Registration revoked by the DEA, which initiated the action. Examples of the offenses include: fraud such as Medicare fraud or fraudulent personal injury claims, prescriptions in exchange for sex, substance abuse by the prescriber, felony conviction of owning and being

on a ship trafficking in heroin and cocaine, prescribing without ever seeing the patients (such as over the Internet), prescribing after one’s state medical license had been suspended or revoked, and other controlled substance violations. Arrests and convictions occurred prior to medical license revocation in some cases. In these cases, the medical appropriateness of the prescribing was the issue. For example, Gabriel Sagun Orzame, MD: in the DEA’s order revoking his controlled substance registration, it described a criminal complaint involving “32 counts of delivery of a controlled substance prescription form. Four undercover officers made undercover visits to the Respondent’s office and he never performed examinations on them. Nevertheless, the Respondent provided prescriptions for controlled substances for the undercover officers

and for other persons who were not there". These also include: Dr. B. prescribed controlled substances to undercover law enforcement personnel and to drug abusers; Dr. B. prescribed opioids without adequate medical testing; Dr. J. prescribed controlled substances for no legitimate medical purpose; and Dr. L. was unlawfully prescribing controlled substances. (16)

II. CONCLUSION:

Many in the Regulatory Affairs Profession believe the New Approach to regulation will eventually be adopted for all healthcare products as it represents the best model for delivering new healthcare advances to market in a reasonable time with acceptable safety.

Regulatory Affairs department is constantly evolving and growing and is the one which is least impacted during the Acquisition and Merger, and also during recession. Regulatory Affairs departments are growing within companies. Due to the changing resources necessary to fulfill the regulatory requirements, some companies also choose to outsource or outtask regulatory affairs to external service providers. In today's competitive environment the reduction of the time takes to reach the market is critical to a product's and hence the company's success. The proper conduct of its Regulatory Affairs activities is therefore of considerable economic importance for the company.

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