Today, the goals of pharmaceutical policy and medical practice are often undermined due to institutional corruption — that is, widespread or systemic practices, usually legal, that undermine an institution's objectives or integrity. In this symposium, 16 articles investigate the corruption of pharmaceutical policy, each taking a different look at the sources of corruption, how it occurs, and what is corrupted. We will see that the pharmaceutical industry's own purposes are often undermined. Furthermore, pharmaceutical industry funding of election campaigns and lobbying skews the legislative process that sets pharmaceutical policy. Moreover, certain practices have corrupted medical research, the production of medical knowledge, the practice of medicine, drug safety, the Food and Drug Administration's oversight of the pharmaceutical market, and the trustworthiness of patient advocacy organizations.

Why, when confronted with policy alternatives that could improve patient care, public health, and the economy, does Congress neglect those goals and tailor legislation to suit the interests of pharmaceutical corporations? In brief, for generations, the pharmaceutical industry has convinced legislators to define policy problems in ways that protect its profit margin. It reinforces this framework by selectively providing information and by targeting campaign contributions to influential legislators and allies. In this way, the industry displaces the public's voice in developing pharmaceutical policy. Unless citizens mobilize to confront the political power of pharmaceutical firms, objectionable industry practices and public policy will not change. Yet we need to refine this analysis. I propose a research agenda to uncover pharmaceutical influence. It develops the theory of dependence corruption to explain how the pharmaceutical industry is able to deflect the broader interests of the general public. It includes empirical studies of lobbying and campaign finance to uncover the means drug firms use to: (1) shape the policy framework adopted and information used to analyze policy; (2) subsidize the work of political allies; and (3) influence congressional voting.

This paper explains how the current architecture of the pharmaceutical markets has created a misalignment of financial incentives and public health that is a central cause of harmful practices. It explores three possible solutions to address that misalignment: taxes, increased financial penalties, and drug pricing based on value. Each proposal could help to partly realign financial incentives and public health. However, because of the limits of each proposal, there is no easy solution to fixing the problem of financial incentives.
Improper dependencies slant policy over a drug’s life span, biasing the development of new drugs, the testing and marketing approval for new drugs, and the monitoring of patient safety after drugs are marketed. This article examines five ways in which the public improperly depends on pharmaceutical firms that compromise the integrity of pharmaceutical policy. Today the public relies on pharmaceutical firms: (1) to set priorities on drug research and development; (2) to conduct clinical trials to test whether drugs are safe and effective; (3) to decide what clinical trial data to disclose to the public; (4) to monitor postmarketing drug safety; (5) to supply product information to physicians and to finance continuing medical education and other professional activities. The article suggests options to overcome each of these dependencies.

Over the past 35 years, patients have suffered from a largely hidden epidemic of side effects from drugs that usually have few offsetting benefits. The pharmaceutical industry has corrupted the practice of medicine through its influence over what drugs are developed, how they are tested, and how medical knowledge is created. Since 1906, heavy commercial influence has compromised congressional legislation to protect the public from unsafe drugs. The authorization of user fees in 1992 has turned drug companies into the FDA’s prime clients, deepening the regulatory and cultural capture of the agency. Industry has demanded shorter average review times and, with less time to thoroughly review evidence, increased hospitalizations and deaths have resulted. Meeting the needs of the drug companies has taken priority over meeting the needs of patients. Unless this corruption of regulatory intent is reversed, the situation will continue to deteriorate. We offer practical suggestions including: separating the funding of research and education from other professional activities. The article suggests options to overcome each of these dependencies.

The problem of the manipulation of data that arises when there is both opportunity and incentive to mislead is better accepted and studied — though by no means solved — in financial accounting than in medicine. This article analyzes pharmaceutical company manipulation of medical research as part of a broader problem of corporate manipulation of data in the creation of accounting profits. The article explores how our understanding of accounting fraud and misinformation helps us understand the risk of similar information manipulation in the medical sciences. This understanding provides a framework for considering how best to improve the quality of medical research and analysis in light of the current system of medical information production. I offer three possible responses: (1) the use of the Dodd-Frank whistleblower provisions to encourage reporting of medical research fraud; (2) a two-step academic journal review process for clinical trials; and (3) publicly subsidized trial-failure insurance. These would improve the release of negative information about drugs, thereby increasing the reliability of positive information.
different sorts of regulation depending on the context. It suggests more tailored enforcement mechanisms that will be sensitive to the pharmaceutical researchers’ unique work motivations and to their awareness or lack of awareness of their own misconduct.

629
The Ethics of Pharmaceutical Research Funding: A Social Organization Approach
Garry C. Gray

This paper advances a social organization approach to examining unethical behavior. While unethical behaviors may stem in part from failures in individual morality or psychological blind spots, they are both generated and performed through social interactions among individuals and groups. To illustrate the value of a social organization approach, a case study of a medical school professor’s first experience with pharmaceutical-company-sponsored research is provided in order to examine how funding arrangements can constrain research integrity. The case illustrates three significant ways that institutional corruption can occur in the research process. First, conflicts of norms between pharmaceutical companies, universities, and affiliated teaching hospitals can result in compromises and self-censorship. Second, normal behavior is shaped through routine interactions. Unethical behaviors can be (or can become) normal behaviors when they are produced and reproduced through a network of social interactions. Third, funding arrangements can create networks of dependency that structurally distort the independence of the academic researcher in favor of the funder’s interests. More broadly, the case study demonstrates how the social organization approach deepens our understanding of the practice of ethics.

MEDICAL KNOWLEDGE AND PRACTICE

635
Key Opinion Leaders and the Corruption of Medical Knowledge: What the Sunshine Act Will and Won’t Cast Light On
Sergio Sismondo

The pharmaceutical industry, in its marketing efforts, often turns to “key opinion leaders” or “KOLs” to disseminate scientific information. Drawing on the author’s fieldwork, this article documents and examines the use of KOLs in pharmaceutical companies’ marketing efforts. Partly due to the use of KOLs, a small number of companies with well-defined and narrow interests have inordinate influence over how medical knowledge is produced, circulated, and consumed. The issue here, as in many other cases of institutional corruption, is that a few actors have accumulated the power to shape the information on which many others base their decisions. Efforts to address this corruption should focus on correcting large imbalances in the current political economy of medical knowledge. A sequestration of pharmaceutical research and development on one hand from pharmaceutical marketing on the other, though difficult to achieve, would address this and many other problems.

644
Drug Firms, the Codification of Diagnostic Categories, and Bias in Clinical Guidelines
Lisa Cosgrove and Emily E. Wheeler

The possibility that industry is exerting an undue influence on the culture of medicine has profound implications for the profession’s public health mission. Policy analysts, investigative journalists, researchers, and clinicians have questioned whether academic-industry relationships have had a corrupting effect on evidence-based medicine. Psychiatry has been at the heart of this epistemic and ethical crisis in medicine. This article examines how commercial entities, such as pharmaceutical companies, influence psychiatric taxonomy and treatment guidelines. Using the conceptual framework of institutional corruption, we show that organized psychiatry’s dependence on drug firms has led to a distortion of science. We describe the current dependency corruption and argue that transparency alone is not a solution. We conclude by taking the position that the corruption of the evidence base in diagnostic and practice guidelines has compromised the informed consent process, and we suggest strategies to address this problem.

654
Rooting Out Institutional Corruption to Manage Inappropriate Off-Label Drug Use
Marc A. Rodwin

Prescribing drugs for uses that the FDA has not approved — off-label drug use — can sometimes be justified but is typically not supported by substantial evidence of effectiveness. At the root of inappropriate off-label drug use lie perverse incentives for pharmaceutical firms and flawed oversight of prescribing physicians. Typical reform proposals such as increased sanctions for manufacturers might reduce the incidence of unjustified off-label use, but they do not remove the source of the problem. Public policy should address the cause and control the practice. To manage inappropriate off-label drug use, off-label prescriptions must be tracked in order to monitor the risks and benefits and the manufacturers’ conduct. Even more important, reimbursement rules should be changed so that manufacturers cannot profit from off-label sales. When off-label sales pass a critical threshold, manufacturers should also be required to pay for independent testing of the safety and effectiveness of off-label drug uses and for the FDA to review the evidence. Manufacturers should also finance, under FDA supervision, programs designed to warn physicians and the public about the risks of off-label drug use.

MARKETING

665
Physicians under the Influence: Social Psychology and Industry Marketing Strategies
Sunita Sah and Adriane Fugh-Berman

Pharmaceutical and medical device companies apply social psychology to influence physicians’ prescribing behavior and decision making. Physicians fail to recognize their vulnerability to commercial influences due to self-serving bias, rationalization, and cognitive dissonance. Professionalism offers little
Patient Advocacy Organizations: Institutional Conflicts of Interest, Trust, and Trustworthiness

Susannah L. Rose

Patient advocacy organizations (PAOs) advocate for increased research funding and policy changes and provide services to patients and their families. Given their credibility and political clout, PAOs are often successful in changing policies, increasing research funding, and increasing public awareness of medical conditions and the problems of their constituents. In order to advance their missions, PAOs accept funding, frequently from pharmaceutical firms. Industry funding can help PAOs advance their goals but can also create conflicts of interest (COI). Research indicates that bias may occur, even among well-meaning professionals, when people and organizations have financial COI. Industry funding may therefore influence PAOs to act in ways that favor the interests of their donors, which may increase the risk of harm to patients. This article extends the analysis developed in the Institute of Medicine report, Conflicts of Interest in Medical Research, Education, and Practice, and applies the analysis to understand PAOs and their relationships with industry. It argues that the preferred goal of institutional COI policies should not be to promote trust, but to promote trustworthiness and appropriately placed trust.

Independent Articles


Kevin Outterson, John H. Powers, Enrique Seoane-Vazquez, Rosa Rodriguez-Monguio, and Aaron S. Kesselheim

Numerous reports have noted decreasing numbers of antibiotic approvals. To determine the context for this decline, we examined all new molecule entities (NMEs) and new biologic licenses (NBLs) approved by the FDA from 1980-2009, and compared approval rates of the 61 approved antibiotics to trends in other drug classes. We also tracked withdrawals of approved drugs and found more withdrawals for antibiotics than other drug classes. After adjusting for drugs subsequently withdrawn, the record for antibiotic innovation is less dire than previously reported. We also report problems with the quality of the approved antibiotics studied. Future policies providing incentives for new antibiotic development should not be based on simple numerical targets and key provisions should ensure appropriate quality as well as quantity of antibiotic drug innovation.

“Something of an Adventure”: Postwar NIH Research Ethos and the Guatemala STD Experiments

Kaye Spector-Bagdady and Paul A. Lombardo

The STD experiments in Guatemala from 1946-1948 have earned a place of infamy in the history of medical ethics. But if the Guatemala STD experiments were so “ethically impossible,” how did the U.S. government approve their funding? Although much of the literature has targeted the failings of Dr. John Cutler, we focus on the institutional context and research ethos that shaped the outcome of the research. After the end of WWII, Dr. Cassius Van Slyke reconstructed the federal research contracts process into a grant program. The inaugural NIH study section recommended approval of the Guatemala STD experiments at its first meeting. The funding...
and oversight process of the Guatemala research was marked with serious conflicts of interest and a lack of oversight, and it was this structure, as opposed to merely a maleficient individual, that allowed the Guatemala STD experiments to proceed. We conclude that while current research regulations are designed to prevent the abuses perpetrated on the subjects of the Guatemala STD experiments, it takes a comprehensive understanding of research ethics through professional education to achieve the long-standing ideal of the responsible investigator, and ensure ethical research under any regulatory scheme.

711
Ethical Quandaries in Gamete-Embryo Cryopreservation Related to Oncofertility
Leslie Ayensu-Coker, Ellen Essig, Lesley L. Breech, and Steven Lindheim

While cancer rates continue to increase, therapy has dramatically decreased the mortality rates. The increased efficacy of current therapies may unfortunately have profound toxic effects on gamete function in both adolescent and reproductive age groups, with infertility as an expected consequence of cancer therapy. Significant progress in the advancement of fertility preservation therapies provides realistic options for future fertility in cancer survivors. However, a number of challenging issues need to be considered when presenting fertility preservation options. This overview highlights some of these considerations including religious-cultural-ethical values, access to care and cost of services, developmental capacity and consent, and posthumous reproduction.

720
Producing Knowledge about Racial Differences: Tracing Scientists’ Use of “Race” and “Ethnicity” from Grants to Articles
Asia Friedman and Catherine Lee

The research and publication practices by which scientists produce biomedical knowledge about race and ethnicity remain largely unexamined, and most of the existing research looks at the knowledge production process at a single point in time. In light of this, we specifically focus on the questions of whether and in what ways researchers’ discussions of race and ethnicity change over the course of the research process by comparing grant proposals to published articles. Using content analysis, we investigated the use of race and ethnicity in 72 grants funded by the National Cancer Institute of the National Institutes of Health between 1990 and 1999 and 144 matched articles published between 1996 and 2010, tracing the production of biomedical knowledge from study design to published findings. This is also the first study to look at whether the NIH Inclusion Mandate, which went into effect in June of 1994, changed the way investigators research and write about racial and ethnic differences. In following this knowledge production process, we explore how scientists “deliver” on their research proposal goals. In addition, we provide insight into whether and how state policies directed at guiding research practices can shape output.

Columns

733
Currents in Contemporary Bioethics
Epigenetic Exceptionalism
Mark A. Rothstein

This article considers the distinctive features of epigenetics and discusses whether, as a matter of ethics and law, epigenetics should be considered separate from genetics.

737
Public Health Law
Major Trends in Public Health Law and Practice: A Network National Report
James G. Hodge, Jr., Leila Barrasa, Jennifer Bernstein, Courtney Chu, Veda Collmer, Corey Davis, Megan M. Grist, Monica S. Hamer, Jill Krueger, Kerri McGowan Lourey, and Daniel G. Orenstein

Since its inception in September 2010, the Network for Public Health Law has responded to hundreds of public health legal technical assistance claims from around the country. Based on a review of these data, a series of major trends in public health practice and the law are analyzed, including issues concerning: the Affordable Care Act, tobacco control, emergency legal preparedness, health information privacy, food policy, vaccination, drug overdose prevention, sports injury law, public health accreditation, and maternal breastfeeding. These and other emerging themes in public health law demonstrate the essential role of law and practice in advancing the public’s health.

Symposium articles are solicited by the guest editor for the purposes of creating a comprehensive and definitive collection of articles on a topic relevant to the study of law, medicine and ethics. Each article is peer reviewed.

Independent articles are essays unrelated to the symposium topic, and can cover a wide variety of subjects within the larger medical and legal ethics fields. These articles are peer reviewed.

Columns are written or edited by leaders in their fields and appear in each issue of JLME.

Next Issue:
Human Rights and Disability
A Symposium Guest Edited by John-Stewart Gordon and Jerome Bickenbach