
The Internet and the Globalization of Counterfeit Drugs

Donald E. deKieffer, JD

Most Internet users receive unsolicited invitations to enhance their health through the purchase of online medications. Often these medications are illegal and may even be counterfeit. However, there are a few legitimate online pharmacies. The National Association of Boards of Pharmacy has established the Verified Internet Pharmacy Practice Sites program, which certifies the legitimacy of some Internet merchants. Also, there are hundreds of Canadian pharmacies online because of the rise in popularity of Canadian drugs. The actual number of online Canadian pharmacies is difficult to estimate, and many of the so-called Canadian pharmacies are not from Canada.

Besides the few legitimate sites in the United States and Canada, most online pharmacies deal with unapproved, illegal, and counterfeit medication. It is hard to know the number of online pharmacies because of the complex structure of the Internet. Their rapid growth can mainly be attributed to huge profits, but online pharmacies are also used for money laundering and may be used for terrorism. Although the United States has been limited in its actions, it still has taken numerous measures. However, internationally, online pharmacies do not appear to be as much of a problem, so almost any action taken has been led by the United States.

KEY WORDS: Internet, Web sites, counterfeit, pharmaceuticals, drugs, Canadian pharmacies, counterfeit drugs, Internet pharmacies

Despite firewalls that could deter Vulcan, most Internet users still receive unsolicited invitations to enhance their general health (or at least important body parts). While routinely consigned to virtual *Sheol*, these messages illustrate the ubiquity of pharmaceutical sales in the virtual world. Most of these offers are for illegal drugs, and a high proportion are counterfeit by the most conservative definition.¹ The World Health Organization's (WHO's) definition of a counterfeit medicine is a drug "which is deliberately and fraudulently mislabeled with respect to identity and/or source."¹ The United States has adopted a stricter view by incorporating a regime that has patent, trademark, and regulatory considerations for a drug whereas WHO does not provide much protection for patents or trademarks.¹

Although pharmaceutical manufacturers, government agencies, and the academy are well aware of this problem, few studies have been published that attempt to quantify the extent of the Internet drug *souk* and fewer still that identify the beneficiaries of this market. This is understandable for many reasons:

- By the very nature of their trade, Internet vendors of illicit drugs are loathe to disclose much about their business practices or financial returns.

- Research in this field is complicated by the relative anonymity of the Internet as well as technical hurdles in determining the provenance of individual vendors.
- Internet drug merchants generally elude the most nominal safeguards such as those imposed by legitimate auction sites.²
- The apparent size of the market is distorted by individuals operating several sites under different names and soliciting affiliates to link with the principal spider site. The principal spider site has many affiliates that clone the original spider site. When a consumer clicks the link to buy medication, the link will connect back to the original spider site. The affiliate will receive compensation for any sells made through the cloned site. The affiliates are not

To whom correspondence should be addressed: Donald E. deKieffer, deKieffer & Horgan: An International Trade Law Firm, 729 15th Street NW, Suite 800, Washington, DC 20005; e-mail: ddekieffer@dhlaw.com.

Donald E. deKieffer, deKieffer & Horgan: An International Trade Law Firm, Washington, DC.

JOURNAL OF PHARMACY PRACTICE 2006. 19;3:1-7
© 2006 Sage Publications
DOI: 10.1177/0897190006292949

actually selling any drugs, but since there are so many affiliates, it appears like there are a lot of places to buy drugs online. In reality, the drugs are being bought only from the few spider sites.

- Many offers for drugs are scams that merely attempt to receive payment for goods that are never delivered or, more nefariously, to acquire information useful in other crimes such as identity theft.
- The daunting number of possible sites located from a simple Google search for *Internet drug store* dissuades casual (or even manual) searches. (A Google search for the term *Internet drug store* resulted in about 35 million Web sites.³)

Despite these impediments, it is possible to analyze the structure, if not the size, of the online drug market. There are several companies that offer analytical services in this regard. GenuOne (<http://www.genuone.com>), Cyveillance (<http://www.cyveillance.com>), and IntegriChain (<http://integrichain.com>) all employ sophisticated search engines that scan cyberspace, looking for Web sites hawking pharmaceuticals and other goods. These firms can identify and rank likely hits for their clients, which usually are legitimate manufacturers of branded products. The US government also employs high-tech search programs for national security and other purposes. To the author's knowledge, however, the government systems are not keyed to identify and filter Web-based pharmaceutical dealers as discretely and efficiently as consultants such as IntegriChain and others.

THE LEGITIMATE ONLINE MARKET FOR PHARMACEUTICALS

Although most online pharmacies deal in unapproved and even counterfeit drugs, a handful of sites sell legitimate goods. In fact, these sites dispense only legitimate prescriptions in the United States and more so than all the rogue dealers combined (C. Catizone, CEO, National Association of Boards of Pharmacy [NABP], e-mail correspondence, May 11, 2006). The NABP has established the Verified Internet Pharmacy Practice Sites (VIPPS) program, which certifies the legitimacy of some Internet merchants. To get the VIPPS seal for their Web site, vendors must complete a rigorous and carefully monitored qualification process. To be VIPPS certified, a pharmacy must comply with the licensing and inspection requirements of their state and each state to which they dispense pharmaceuticals. In addition, pharmacies displaying the VIPPS seal have demonstrated to NABP compliance with VIPPS criteria

including patient rights to privacy, authentication and security of prescription orders, adherence to a recognized quality assurance policy, and provision of meaningful consultation between patients and pharmacists.⁴ Most VIPPS-certified sites are cyberstores associated with brick-and-mortar pharmacies, most of which are chain drugstores.⁵ There have been no reports of VIPPS-certified Web sites dealing in counterfeit or unapproved drugs; they appear to be about as safe for consumers as their physical parents. However, there has been 1 aberration in Nevada. Prescriptiononline.com was briefly VIPPS certified, but its registration was suspended when VIPPS found out it was a Vicodin mill (L. Ling, general counsel, Nevada State Board of Pharmacy, e-mail correspondence, May 11, 2006).⁶

"CANADIAN" PHARMACIES ON THE INTERNET

In the past several years, hundreds of Web sites purporting to offer "Canadian" drugs have become popular with American consumers. Public officials seeking lower drug prices for their constituents or employees have bolstered this trend.^{7,8} "Canadian" drugs are often made in the United States and sold in Canada by the manufacturers at prices below those available in the United States. This is in part due to rather complex price control regulations in various Canadian provinces.^{9,10} Many Canadian Web sites are operated by legitimate Canadian drugstores; others are independent but have prescriptions filled by duly registered pharmacies.

Health Canada (Health Canada is the rough equivalent of the US Food and Drug Administration [FDA]) estimates that there are about 270 Internet pharmacies operating from that country.¹¹ However, Canadian Internet pharmacies are probably fewer than most people think, and the numbers change on a daily basis (in fact, just 3 years ago, there was only about an estimated 120 Canadian Internet pharmacies).^{12,13} That Health Canada can only estimate the number speaks volumes about the fluidity of this enterprise. Some Canadian drugstores operate multiple Web sites, and numerous independent sites have prescriptions filled at the same pharmacy. Furthermore, Canada-based sites enter and depart from the commercial scene with astonishing alacrity. Others merge or "reverse merge" on almost a weekly basis. Because of this, it is almost impossible to count real Canadian sites with certainty. The Health Canada estimates, however, seem fairly close to the mark. An analysis by EDDI, Inc in 2006 showed 220 Canada-based pharmacies. Among these,

however, were several that had gone out of business by the time the survey was completed.

The premise on which many US consumers purchase “Canadian” drugs is often false. While it is true that some pharmaceuticals sold by Canadian pharmacies are manufactured in the United States under FDA supervision, there is no requirement in Canada that only such drugs can be offered to Americans. Indeed, drugs that are exported from Canada may not even meet Canadian standards. Canada-based online pharmacies can and do acquire their stocks from multiple sources, including Europe, the Middle East, Asia, and Latin America.¹⁴ Canadian labeling requirements often do not conform to those of the United States, even when the drug itself is legitimate.¹⁵

The FDA has cited numerous Canadian pharmacies for sending unapproved medications to US consumers and has placed more than 20 Canadian pharmacies on their list of exporters whose goods should be seized by US Customs on sight.¹⁶ In addition, the FDA has sought criminal prosecution of several Canadian sites for selling unapproved and even counterfeit versions of pharmaceuticals to US consumers. For example,

On March 9, 2006, the United States District Court for the Southern District of New York entered a Consent Decree that permanently enjoins Canada Care Drugs, Inc. (Canada Care), Christine Ruggiero, and Claire Ruggiero (defendants) from causing the importation of drugs, receiving commissions from the importation of drugs, and advertising or promoting any drug importation service.

Additional FDA inspections, as directed by the court order, will be used to ensure that the defendants do not continue to violate the law. In addition, the court ordered the defendants to surrender to the U.S. Treasury \$4,000 in profits from their illegal activities.

“This court order is another example of the FDA’s efforts to stop illegal drug imports—a practice which can present a health hazard to patients,” said Margaret O’K. Glavin, Associate Commissioner for Regulatory Affairs. “Our agency will continue to help protect Americans from potentially harmful consequences of this practice, while also working to help assure that Americans have access to quality, safe, and effective products.”

The permanent injunction is the result of a legal process that started on November 9, 2004, when the federal government filed a civil complaint against these defendants based on an FDA investigation of Canada Care’s illegal importation operations. This consent decree of permanent injunction follows one

filed August 20, 2004 in the case of Rx Depot and Rx of Canada, where the defendants were also ordered to cease all operations involving the illegal importation of prescription drugs.

FDA’s investigation, conducted in February and August, 2004, involved undercover purchases of prescription medications through Canada Care. Medications purchased outside the consumer safety protections built into the U.S. drug distribution system are a public health concern because patients cannot be sure of the quality or the safety and effectiveness of such drugs. In addition, as in the case of products purchased undercover by FDA from Canada Care, these kinds of products are often shipped with inadequate instructions for use or in inappropriate quantities that facilitate use of the product without the input of a physician that is needed to assure that the product is used in a manner to prevent serious, and even fatal, consequences.¹⁷

In addition, previous FDA investigations found that drugs purchased under these conditions are more likely to be contaminated, counterfeit, or inherently ineffective or to contain different amounts of the active ingredients from similar drugs that are FDA approved and are safeguarded by the consumer protections built into the US drug distribution system.

Although prices for some pharmaceuticals offered by Canadian pharmacies are often less than those in the United States, this is not always the case. For generic drugs in particular, US retail prices are usually cheaper than those available in Canada.

Finally, there is the problem of so-called “Canadian” pharmacies being actually located somewhere south of the 49th parallel. Dozens of sites with *Canada* in their name are physically present in such countries as Barbados, Mexico, or even south Florida.¹⁸ The mere inclusion of a maple leaf flag on a Web site is insufficient to establish a real Canadian identity but is a useful ruse in persuading credulous consumers that its goods are safe.

Notwithstanding the problems surrounding Canada-based drug purveyors, American politicians and battalions of consumers continue to tout the virtues of cheap pharmaceuticals north of the border. One congressman is fond of saying, “Show me the dead Canadians.”^{19,20} Minnesota congressman Gil Gutknecht and consumer groups such as the AARP and the Vermont-based United Health Alliance want the FDA to allow Americans have access to inexpensive drugs. These proponents say the rewards outweigh the potential risks: it is better for citizens to take medications from a legitimate foreign distributor than not to get their medications at all. “The FDA’s

concerns for safety apparently do not extend to seniors who cannot afford their prescribed drugs," says Gutknecht. "The FDA does not look at the issue as if [these senior citizens] are sustaining their health. The FDA sees only that they are improperly importing pharmaceuticals."⁷ In fact, counterfeit drugs have been identified in Canada. In September 2005, Hamilton, Ontario, pharmacist Abadir Nasr was charged with dispensing counterfeit Norvasc, a hypertension drug. Medical examinations have been conducted on 5 persons who died, apparently because of the bogus drugs.²¹ This question is also mooted by the fact that Canadians may not be imbibing the same drugs that are being sold to Americans. As noted above, Health Canada controls pharmaceuticals sold for Canadian consumption, not those destined for export. The FDA has identified and seized thousands of unapproved drugs being sent to US residents from Canada. The precise number of counterfeit and unapproved medications exported from Canada to the United States, however, is unknown.

STRUCTURE OF THE ROGUE INTERNET PHARMACY INDUSTRY

Aside from the VIPPS-certified pharmacies and a few "Canadian" sites, most Internet pharmacies offer a toxic brew of unapproved, illegal, and counterfeit medications. No one knows the precise number of Internet purveyors of these goods due in part to the structure of this industry.

I use the term *rogue* to describe these Web sites since they are rarely approved by any governmental authority, often lack any knowledge of pharmacology, and are sometimes operated by criminal elements. These sites, however, vary greatly in their compliance with even minimal norms of responsible prescribing. They fall into 3 general categories.

Prescription-Required Sites (Record Online Pharmacies)

Some online drugstores (and all VIPPS-approved sites) demand valid prescriptions before they will send medications. In the case of some Canadian sites, the prescriptions must be countersigned by a Canadian physician.

Online Forms Sites

These sites require a user to fill out a medical form, which is reviewed by one of their designated doctors. No personal examination is required. Given

the anonymity of the Internet, the accuracy of the answers given is also problematic. Numerous studies and reports have demonstrated that almost anyone can get whatever drugs they want if they are willing to lie about their condition.

Even the sites that require customers to fill out an online medical questionnaire make mistakes. On average, e-doctors evaluate 300 applications per day. That amounts to about 90 seconds per application if the physician works an 8-hour day with no break. Because they are paid from \$5 to \$80 per application, doctors have considerable incentive to rush through the pile. One particularly ambitious physician rubber stamped 1700 applications in a single day, reports the Federation of State Medical Boards.⁷ Many states have followed the example of Nevada and banned e-consultations entirely.⁷ In other cases, state medical boards have passed resolutions discouraging the practice.⁷ "The use of on-line questionnaires or cyber doctor consultations are practices which the state medical boards and Federation of State Medical Boards (FSMB) question as meeting standards for care" (C. Catizone, e-mail correspondence, May 11, 2006).

Affiliate Sites

Many of the major online pharmacies operate affiliate programs. Affiliates are generally Web surfers who agree to set up clone pages mimicking the Web site of the spider and/or merely post a URL link on their site to the pharmacy. These affiliates are paid a small commission (usually less than \$5) for each order placed by a customer who has clicked through the affiliate's link. The affiliates generally have no other contact with the spider site and can be located anywhere in the world. The existence of hundreds of affiliates complicates the enumeration of Web sites offering prescription medications in that it is often difficult to discern the spider from the affiliates. Furthermore, some affiliate programs work like multilevel marketing schemes, in which affiliates have their own stable of subaffiliates, each generating a commission for themselves and a bit for the level above them as well.

No-Record Online Pharmacies

Hundreds of Web sites offer prescription drugs without even a pretense of acquiring a prescription. Many of these offer controlled substances such as Oxycontin, Valium, and Percocet; others purvey products that are entirely banned in the United

States such as Rohypnol. Most of these sites take pains to disguise their location, often registering under proxy names and leaving few traces for investigators to trace their identity. Companies such as IntegriChain, however, have developed software programs that can sometimes detect the source of these offers through sophisticated link analysis. Joshua Halpern, the vice president of IntegriChain, said that nearly two thirds of a sample of 180 Web sites claiming in November 2005 to sell schedule 2, 3, or 4 controlled substances appeared to have hosts in the United States.²² Those Web sites represented at most 103 distinct operations that purportedly sell controlled substances, and most of those sites apparently had had their domain name, or alphanumeric Web address, for more than a year.²² "No prescription needed" Web sites, however, almost always sell medications such as Viagra, Propecia, and other "lifestyle" drugs in addition to narcotics.

MOTIVATION OF OPERATORS

Profit

The allure of quick cash is generally behind the rapid proliferation of e-pharmacies. FDA records show that one operator reaped more than \$28 million in prescription drug sales, doctor consultation charges, and shipping fees. Neither of the 2 sites run by this operator had a licensed pharmacist on staff.²³ Vincent Chhabra, for example, was sentenced to 33 months in federal prison for operating more than a dozen Internet pharmacies from his Florida mansion.²³ At one point, Chhabra was taking in more than \$2 million per month in Internet orders,²³ and \$28 million is at the lower end of the spectrum. "Some of these operations are big—to the tune of hundreds of millions of bucks," according to Lew Kontnik, a security consultant who has worked closely with the FDA on anticounterfeiting efforts and coauthored *Counterfeiting Exposed: Protecting Your Brand and Customers*.⁷

Money Laundering

There have been numerous instances in which Internet drug sales have been a vehicle for large-scale money-laundering schemes.²⁴ Given the huge sums that can be generated by Web sites selling prescription drugs, this is hardly surprising. These enterprises have plenty of room to disguise the transfer of funds derived from other illegal enterprises as well.²⁵

Terrorist Funding

Multiple articles, books, and studies suggest that terrorist groups have used online pharmacies to finance their activities. Some have even speculated that terrorists could use such Web sites to introduce poisons into the market.¹⁸

Although it is undeniable that

1. groups linked to terrorists have used counterfeiting as a source for funding,²⁵
2. terrorists have been repeatedly linked to illicit narcotics sales,²⁶
3. foreign criminal groups have been deeply involved with illicit Web sites selling pharmaceuticals,
4. counterfeit and unapproved drugs are ubiquitous on the Internet, and
5. Internet pharmacy sales would be an ideal vehicle for terrorist mischief,

there have been no recorded (ie, public) instances of terrorists using Internet pharmacies either as a money-laundering vehicle or to introduce counterfeit drugs into the US market.

Despite the lack of any provable current link between terrorism and Internet pharmacies, the US government and private companies have been actively exploring this vulnerability. Merely because terrorists have not yet peddled counterfeit drugs on the Internet does not mean they cannot do so.

One frightening scenario has terrorists sending a deadly toxin (eg, anthrax) in small amounts to public figures and the news media, creating headlines throughout the country. Worried citizens attempt to acquire antidotes such as Cipro but are unable to find it locally. They turn to the Internet, where dozens of sites offer this product. If controlled by terrorists, such sites could dispense dioxin in lieu of the promised Cipro, poisoning thousands of Americans at their own expense.

US GOVERNMENT RESPONSE

The US government's response to Internet drug sales has been necessarily limited:

1. Neither the US authorities nor anyone else has control over what may be posted on the Web. By its very nature, Internet content is in the hands of millions of users, many of whom are beyond the reach of US law.
2. Because of the diffraction and relative anonymity of the Internet, it is often difficult to precisely identify the parties responsible for actually selling counterfeits and unapproved medications.

3. There are thousands of “apparent” Web sites offering unapproved or counterfeit drugs, but many of these are clones or affiliates of a much smaller group. Identifying the actual purveyors usually requires painstaking research.
4. Political factors sometimes influence the zeal with which the authorities will act. For example, closing an online pharmacy offering arthritis drugs to elderly folks may cause a serious political backlash, jeopardizing a wide range of enforcement options.

Despite these limitations, the US government has taken numerous actions, few of which have received significant publicity.

- Hundreds of US-based Web sites have been taken down in the past 5 years. In July 2005, for example, the Drug Enforcement Administration, operating with the Florida Department of Law Enforcement, closed 2 Internet sites, Hotdeals.com and JetsRX.com, which were filling 2000 orders per week. Nine subjects were arrested pursuant to Florida state arrest warrants for trafficking in hydrocodone, racketeering, conspiracy to traffic in hydrocodone, dispensing prescription drugs without a pharmacist license, dispensing without a prescription, forgery of a prescription drug label, sale of an adulterated or misbranded drug, and adulterating a drug intended for distribution.²⁷
- So-called cyber letters have been sent to dozens of offshore Internet pharmacies by the FDA warning them to cease unapproved sales to US residents.²⁸
- The FDA has issued import alerts, which direct the customs authorities to detain drugs sent from hundreds of named foreign exporters. Most of the named subjects operate offshore-based Web sites.
- The FDA and the US Customs and Border Protection (CBP) have quietly detained thousands of packages containing drugs that were mailed to the United States by foreign Internet pharmacies. The authorities apparently hope that the resulting commercial damage to these operators and their customers will discourage continued operation. It is impossible for the CBP or the FDA to physically examine all packages containing drugs, but targeted detentions have caused considerable consternation in the underground Internet drug industry.
- Scores of US residents have been charged under various laws for selling unapproved drugs or selling drugs without appropriate authority over the Internet.

Given the scope of the government’s actions, it might be fairly argued that the US authorities—especially the FDA—have been unduly reticent in publicizing their efforts. These enforcement initiatives have been undertaken despite the limitations noted above and have received little public notice.

Of course, given the political sensitivities of this issue, it seems probable that some in the FDA bureaucracy are not anxious to tout their successes.

INTERNATIONAL EFFORTS TO COMBAT INTERNET PHARMACIES

Whereas the United States has only whispered its success against purveyors of counterfeit drugs on the Internet, international law enforcement agencies appear to have been struck dumb. There have been several instances of international cooperation in closing down these operations,²⁹ but almost all have been led by the United States. For example, Operation Cyber Chase in 2005 involved cooperation of law enforcement agencies in Cyprus, India, Singapore, the Channel Islands, Isle of Man, West Indies, Antigua, and Ireland.²⁷ Illegal financial transactions listed in the US indictment totaled more than \$6 million, with restitution sought for that amount.²⁹ This operation closed down a ring of Internet pharmaceutical bandits operating from India and Philadelphia, known as the Bansal Organization.²⁹

In the case of Europe, Internet sales of drugs are much less popular than in the United States because of the relative cheapness of pharmaceuticals on the Continent. This, combined with a lax attitude toward parallel trade and the relative ease of acquiring almost any drug imaginable on the street, makes the Internet somewhat moot in this regard. Obviously, law enforcement resources will not be spent where little problem is perceived to exist. In September 2005, the Pacific Research Institute organized a conference in Washington, DC, titled “21st Century Health Care Terrorism: The Perils of International Drug Counterfeiting.” Speakers included a broad array of international experts; none discussed law enforcement efforts to stop Internet sales of these goods except in the United States. This conference was representative of many others on the same topic. International silence on this issue is deafening.

Acknowledgments

Donald deKieffer is a principal in the Washington, DC, law firm of deKieffer & Horgan. The author would like to thank Chris Meservy, summer associate, for his assistance.

REFERENCES

1. World Health Organization. General information on counterfeit medicines. Available at: <http://www.who.int/medicines/services/counterfeit/overview/en>. Accessed May 9, 2006.

2. eBay. Your user agreement. Available at: <http://pages.ebay.com/help/policies/user-agreement.html>. Accessed May 10, 2006.
3. Google. Available at: <http://www.google.com/search?hl=en&q=internet+drug+store>. Accessed May 9, 2006.
4. National Association of Boards of Pharmacy. VIPPS. Available at: <http://www.nabp.net>.
5. National Association of Boards of Pharmacy. Verified internet pharmacy practice sites. Available at: <http://www.nabp.net/vipps/consumer/listall.asp>. Accessed May 9, 2006.
6. Pratt T. State agency hits online pharmacy with fine. *Las Vegas Sun*, January 23, 2003. Available at: <http://www.lasvegassun.com/sunbin/stories/sun/2003/jan/23/514560170.html>.
7. Prevention.com. No prescription? No problem. Available at: <http://www.prevention.com/article/0,5778,s1-1-63-63-3591-1-P,00.html>. Accessed May 9, 2006.
8. Prescription drugs. Congressman Bernie Sanders Web site. Available at: <http://bernie.house.gov/documents/prescriptions/index.asp>. Accessed May 9, 2006.
9. Hollis A, Ibbott P. How parallel trade affects drug policies and prices in Canada and the United States. *Am J Law Med*. In press.
10. Vernon JA, Golec JH, Hughen WK. The economics of pharmaceutical price regulation and importation: refocusing the debate. *Am J Law Med*. In press.
11. Health Canada. Fact sheet: compliance inspections of Canadian pharmacy sites selling prescription drugs via the Internet or other forms of distance dispensing. November 16, 2004. Available at: http://www.hc-sc.gc.ca/dhp-mps/alt_formats/hpfb-dgpsa/pdf/compli-conform/fact_sheet_feuillet_doc_e.pdf.
12. National Association of Pharmacy Regulatory Authorities. FAQs. Available at: <http://www.napra.org/docs/0/586/717/719.asp>. Accessed May 15, 2006.
13. Hollis A, Anis A. Commentary: Rx for Canada: close the Internet pharmacies. October 2005. Available at: http://www.cdhowe.org/pdf/commentary_205.pdf.
14. US Food and Drug Administration. Recent FDA/U.S. customs imports blitz exams continue to reveal potentially dangerous illegally imported drug shipments. January 27, 2004. Available at: <http://www.fda.gov/bbs/topics/NEWS/2004/NEW01011.html>.
15. Kleiman MEF. State regulation of Canadian pharmacies: a prescription to violate the supremacy clause. *Am J Law Med*. In press.
16. Import alert 66-41. May 4, 2006. Available at: http://www.fda.gov/ora/fiars/ora_import_ia6641.html.
17. US Food and Drug Administration. Permanent court order halts illegal importation of prescription drugs. March 31, 2006. Available at: <http://www.fda.gov/bbs/topics/NEWS/2006/NEW01345.html>.
18. Global Options, Inc. An analysis of terrorist threat to America's medicine supply. Gaithersburg, Md: Signature; 2003.
19. Pitts P. Keynote address at the 21st-Century Terrorism Drug Counterfeiting Conference, September, 20 2005, Washington, DC. Available at: http://www.pacificresearch.org/pub/sab/health/2005/Drugs_Counterfeiting_papers.pdf.
20. Sirota D, Harvey C, Legum J. Dead Canadians. *Progress Report*, November 21, 2003. Available at: <http://www.americanprogress.org/site/pp.asp?c=biJRJ8OVF&b=38346#1>.
21. Miller S. "Disciplining" Canadians pharmacists—from Nevada. Nevada Policy Research Institute Research Brief, September 27, 2005. Available at: http://www.npri.org/issues/issues05/ib_092705.htm.
22. Safety of imported pharmaceuticals: strengthening efforts to combat the sales of controlled substances over the Internet. Hearing Before the Subcommittee on Oversight and Investigations and the House Committee on Energy and Commerce, 109th Congress, 143 (2005). Statement of Joshua Halpern, vice president, Integrichain, Inc.
23. US Food and Drug Administration. Guilty pleas entered on FDA case involving illegal drug trafficking. September 2, 2004. Available at: <http://www.fda.gov/bbs/topics/news/2004/NEW01112.html>.
24. A prescription for safety: the need for H.R. 3880, the Internet Pharmacy Consumer Protection Act. Hearing on H.R. 3880 Before the House Committee on Government Reform, 108th Congress 23 (2004). Statement of William K. Hubbard, associate commissioner for policy and planning, Food and Drug Administration.
25. International Anticounterfeiting Coalition. *The Negative Consequences of International Intellectual Property Theft: Economic Harm, Threats to the Public Health and Safety and Links to Organized Crime and Terrorist Organizations* [White Paper]. Washington, DC: International Anticounterfeiting Coalition; 2005. Available at: <http://www.iacc.org/WhitePaper.pdf> [hereinafter IACC White Paper].
26. Kleiman MAR. Illicit drugs and the terrorist threat: causal links and implications for domestic drug control policy. Available at: <http://www.fas.org/irp/crs/RL32334.pdf>.
27. US Drug Enforcement Administration. 9 arrested in Florida's largest ever prosecution of an online pharmacy. July 15, 2005. Available at: <http://www.dea.gov/pubs/states/newsrel/miami071505.html>.
28. Center for Drug Evaluation & Research. "Cyber" letters 2002. Available at: <http://www.fda.gov/cder/warn/cyber/cyber2002.htm>. Accessed May 9, 2006.
29. US Drug Enforcement Administration. International Internet drug ring shattered. April 20, 2005. Available at: <http://www.dea.gov/pubs/pressrel/pr042005.html>.