The Internet has increasingly become an intrinsic part of everyday life, offering countless possibilities for education, services, recreation, and more. In fact, an entire virtual life within the digitalized World Wide Web is possible and common among many Internet users. Today’s psychiatrists must therefore incorporate this dimension of human life into clinical practice, to achieve an adequate assessment of the tools and risks available to the patient. We focus on the Internet as a portal for the trade of and access to substances of abuse. We review the legal regulations that may inform care and standards of practice and analyze the difficulties that arise in assessment and monitoring of the current situation. We consider the potential impact of Internet-based narcotics trade on addiction morbidities and the practice of clinical psychiatry, as well as on the potential legal implications that the forensic expert may face.

“People, places, and things. . .” I hear it almost without variation, each time I discuss triggers for relapse with patients suffering from substance abuse. The conversation continues with the predictability of a hymn: “There is no getting away, the dealers stand at the turn of every corner; they know how to find me.” We have learned that illicit drug suppliers are not the glamorous mafia leaders that we typically see in such movies as Goodfellas, but rather an infinite number of runner boys that emerge from every crack in the sidewalk. Now, however, the pipeline opens up inside each individual’s home. It is estimated that more than 1.9 billion individuals worldwide are connected to the Internet. Illicit drug portals are common and easy to find and range from informative websites such as erowid.com to mass-delivered emails with purchase offers. In light of an evergrowing problem that invades people’s lives from every angle of their environment, we attempt to review the potential impact of Internet-based narcotics trade on the addiction morbidities and the practice of clinical psychiatry, as well as the potential legal and ethics-based implications of this problem.

Prescription drug abuse is the nation’s fastest growing drug problem, responsible for significant increases in drug overdoses in recent years. Nonprescription use of opioids, sedatives, and tranquilizers by adolescents is also on the rise. Of particular concern is the rapid rate of initiation of oxycodone and hydrocodone use among adolescents. According to a 2009 drug threat assessment, the highest percentage of increases for nonmedical use of opiates in the United States since 2003 was for hydrocodone products (118%), morphine (111%), and methadone (109%). A study conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA) between 1998 and 2008 revealed that substance abuse treatment admissions involving abuse of pain relievers increased by 400 percent. According to a SAMHSA study, emergency department (ED) visits involving nonmedical use of narcotic pain relievers rose from 144,644 in 2004 to 305,885 in 2008, an increase of 111 percent. ED visits involving oxycodone products, hydrocodone products, and methadone, the three most frequently listed narcotic pain relievers in each year, increased 152, 123, and 73 percent, respectively, between 2004 and 2008. With regard to substance use by minors, the rate of illicit drug use among persons aged 12 or older was approximately eight percent in the years 2007 and

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The 2005 Monitoring the Future (MTF) survey reported that 5.5 percent of 12th graders, 3.2 percent of 10th graders, and 1.8 percent of 8th graders said that they had used oxycodone at least once in the past year, a 29 percent increase since 2002. According to this survey, two in five teens, or approximately 9.4 million in the United States, said that they believed that getting high from prescription medications was “much safer” than using street drugs. Most of the teenagers (13.4 million) agreed that prescription drugs were easier to acquire than illegal street drugs and that prescription painkillers were “available everywhere.”

Drug trade over the Internet ranges from prescription drug sales that are medically indicated, to misuse of prescription medications, to the purchase and abuse of illicit substances of abuse. In the late 1990s, no-prescription websites (NPWs) began to emerge, which allow for controlled substances to be purchased without a prescription. Internet-based pharmacies have provided customers with conveniences such as reduced pricing, home delivery, electronic reminders of renewals, and medication information. However, because of difficulties in implementing appropriate monitoring and regulatory systems, they have also provided a means for the increased misuse of prescription medications. NPWs are numerous and anonymous, two factors that make possible the trade of controlled substances. Illicit trade or purchase of narcotics may now be completed at any location, public or private, without the need to procure substances in a particular spot or from a particular contact. According to the International Narcotics Control Board (INCB), illicit drug trades may occur online or on mobile devices, and they are facilitated by private chat rooms that easily evade law enforcement strategies or by foreign hosts in countries that do not have strict cybercrime laws.

Despite this rising problem and the ubiquitous availability of substances online, scientific data regarding this matter are scant. The implication of a connection between the rise of narcotics abuse, particularly among adolescents, and the rise of NPWs is immediately apparent: the Internet became publicly available in the mid-1990s and was rapidly incorporated into numerous aspects of everyday life. The generation of those who are 20 years old and younger has developed within an Internet-based social, educational, and recreational context. However, a correlation between these two variables has not been scientifically validated.

Speaking more directly to the relationship between the Internet and the acquisition of drugs for recreational or abuse purposes, a pilot study conducted by Gordon et al. asked 100 patients newly admitted to a private residential addiction treatment program how they obtained their drugs in the 30 days before admission: 29 percent stated that they knew illicit drugs could be purchased online, 9 percent reported making illicit online purchases, and 2 percent said that they found their dealers online. Among the nine patients who reported buying drugs from an NPW, six had purchased prescription drugs (opioids and anxiety medications), and three had bought unspecified, so-called club drugs. In a different study that looked at more than 1,000 patients admitted for treatment of substance use, the Internet was mentioned as the source of prescription opioids for the purposes of abuse in only six percent of the studied population. The researchers then attempted to purchase a controlled substance themselves (tramadol) and found it to be freely available.

Beyond awareness of this burgeoning problem, several concerns must be discussed, both from a clinical perspective and from the viewpoint of potential forensic psychiatry evaluations.

Clinical Impact

Little is known about what effect these web sites have on public health and what clinical strategies should be in place. There is increasing interest in the question of whether ubiquitous availability has translated into an increased prevalence of substance use disorders. On the other hand, the Internet has been effectively used as an avenue for counseling on drug use and even as a meeting place for addicts in ongoing recovery.

Doctor-Patient Relationship

The therapeutic relationship may be jeopardized by any addiction and the behaviors that emerge in pursuit of the substance or as a consequence of it. However, even behavior such as seeking a prescription from a physician provides an opportunity for identification of illness and outreach to the patient. These are opportunities in which a motivational stage toward recovery may be assessed, and proper referral may be instated. If, on the other hand, the patient attains opioids through the Internet, contact
with services diminishes, further worsening the potential adverse outcomes.

**Therapeutics**

Drug trafficking that occurs on the streets characteristically follows a pattern of zones where certain drugs are known to be preferred and therefore are profitable to the distributors. Psychiatrists, similarly, are usually aware of the common substances of abuse used for recreational or addiction purposes in the locale where they practice. However, in the virtual streets, access to substances may vary extensively, rendering the physician ill prepared or inexperienced in the identification and management of states of intoxication or withdrawal.

**Accuracy of Assessment and Prognosis**

If the Internet were to be considered a potential risk factor for relapse in patients with addiction disorders, active management of online access would have to be incorporated into therapeutic strategies. On the opposite side of the same topic, illicit substance purchases could be considered within the umbrella of risk reduction compromises, favoring a purchase from the privacy of home rather than through exposure to street-based dangers. In regard to this argument, a more extreme position would argue that web-based distribution may protect young children from being recruited by gangs for the main function of distributing their illegal merchandise.

**Role of Forensic Psychiatry**

The overlap of clinical psychiatry and the law on this matter is evident. Here, we mention only a few examples of situations in which the forensic consultant may be asked for an expert opinion.

**Risk Assessment**

Accurate assessments of violence risk may require information such as substance use history. Knowledge of online drug prices, delivery times, and amounts delivered may prove useful for these evaluations. Furthermore, risks of overdose and of successful rescue need to be considered in light of the fact that the consumer may be utilizing substances at home, alone, from different providers, and perhaps at a reduced price (with varying degrees of attained quantity and purity of substances).

**Responsibility**

Parental responsibilities regarding filtering of online access may be called into question, particularly with regard to minors who may be charged with the offense of distributing or may consume the substances themselves. Custody evaluations may actually involve regulation of the Internet as a parameter indicating parenting quality.

**Duty to Report**

It is unclear whether physicians have a duty to report NPWs or other online sources of illicit substances, should they be revealed to them by a patient in the context of a confidential therapeutic relationship. More important, this appears to be more within the realms of an ethics dilemma rather than a legal one, wherein protection to other consumers may be provided through prompt notification to legal enforcement agencies. However, notification without violation of confidentiality may often not be possible.

**Dispersion**

Some online pharmacies do require a prescription to obtain a controlled substance but, in the absence of one, they will provide a prescription for the patient after completion of a brief online questionnaire. These prescriptions are issued by physicians, often located in states different from the purchaser’s state of residence, and litigation has ensued against them on matters of dispersion (the subsequent illegal distribution of the controlled substance by the “patient”) and inadequate examination of the patient.10

**Legal Implications**

**Legal Regulation**

Regulation of these matters is based on the act of possession, distribution, traffic, or importation of the substances. Regulation falls under federal legislation and may be civil or criminal in nature. The Drug Enforcement Administration (DEA) of the Department of Justice (DOJ) issued its Final Rule for the Implementation of The Ryan Haight Online Pharmacy Consumer Protection Act (RHA) in October 2008.18 This act amended the preexisting Controlled Substances Act (CSA) and the Controlled Substances Import and Export Act (CSIEA) to address trafficking of all schedules of controlled substances over the Internet. It became effective on April 13, 2009 (with
the exception of telemedicine which went into effect on January 15, 2010). The RHA specifies that under federal law, it is illegal “to deliver, distribute, or dispense a controlled substance by means of the Internet except as authorized by the CSA, or to aid or abet such activity.”19 The rules also set standards for prescription reporting requirements for online pharmacies and demand at least one face-to-face evaluation of the patient by a physician for a controlled-substance prescription to be issued.

Furthermore, while drug reimportation has been evaluated as a viable alternative for the provision of medications to populations who may not be able to afford the rising costs of their prescriptions, the importation of controlled substances is rendered illegal under 21 U.S.C. § 952 and may carry penalties of up to five years’ imprisonment and monetary damages ($250,000 fine for Schedule III, IV, or V and higher fines for Schedule I, II, and controlled-substance analogs). The Department of Homeland Security Appropriations Act, § 535, Customs and Border Patrol, has similar guidelines for the importation of medications. Nonapproved drugs are banned from legal importation by mail under 21 U.S.C. §§ 331(d) and 355(a). Furthermore, laws regulating importation, possession, and trafficking in prescription drugs and/or controlled substances can vary by individual jurisdictions. Possession of a controlled substance without a valid prescription (online issued prescriptions are deemed not valid, as a “face-to-face” relationship with a physician is required) could be sanctioned under 21 U.S.C. § 844 for up to one year and a $1,000 fine.

The International Narcotics Control Board (INCB) is mandated by Article 9 of the Single Convention21 to “endeavor to limit the cultivation, production, manufacture and use of drugs to an adequate amount required for medical and scientific purposes, to ensure their availability for such purposes and to prevent illicit cultivation, production and manufacture of, and illicit trafficking in and use of, drugs.”

Sentencing

According to the Federal Sentencing Guidelines of 2010, U.S.C. § 860a of distributing, or possessing with intent to distribute, methamphetamine on premises where a minor is present or resides, increase by two levels. If the resulting offense level is less than level 14, increase to level 14 (Apply the greatest) [Ref. 22]. Penalties may vary according to the substance and the amount in question. In the case of online-based drug distribution, the seller may be unaware of the consumer’s demographic characteristics, but it remains unclear whether this would serve as a mitigating factor in sentencing. Furthermore, quantities of the substance may be very difficult to establish with online trade.

Cases

In the Northern District Federal Court of Iowa, a New Jersey physician pleaded guilty to a Conspiracy to Dispense Controlled Substances. He was issued a combined sentence of 60 months’ incarceration, followed by three years of supervised release and monetary penalties in the form of a $7,500 fine along with forfeit of almost $500,000 worth of proceeds derived from the drug offense.23 It is estimated that the physician had issued thousands of prescriptions amounting to a value of over $1.5 million worth of proceeds. In Illinois in 2007, two physicians were sued for medical malpractice for issuing prescriptions over the Internet. The civil lawsuit was then followed with felony charges against the two physicians.24

Conclusions

The Internet has become a ubiquitous aspect of life, in every domain. Through this portal, one passes into a virtual reality in which anything can be found, at any time, from anywhere. Some boundaries have now been abolished, whereas others have been established in response to such an unregulated flow of interaction. Over the Internet, one can purchase opioids, benzodiazepines, amphetamines, anabolic steroids, cocaine, marijuana, hallucinogens, dissociative agents, controlled substance analogs, and other illicit substances (aside from noncontrolled substances used for recreational purposes or medically indicated prescriptions that may be misused or abused). One can also find treatment centers, support groups, education, and even the medications currently being used to treat opioid addictions.

Therefore, it is in the physician’s best interest to assume that an online persona exists for every patient and actively pursue information regarding that vir-
tual life. This will provide increased accuracy of risk assessments and interventions, at the same time, as it may provide optimum utilization of such a resource in the service of patient care. For the forensic psychiatrist, it will become imperative to address the physician’s conduct if a question of online prescribing is raised or if a malpractice lawsuit should be filed.

There appears to be a historical correlation between the years of increased addiction prevalence and the years in which the Internet has been available. Furthermore, the subpopulation most indicative of the rise in substance use is coincidentally the same subpopulation most acquainted with the use of the Internet. However, scientifically validated studies addressing this epidemiological question among others should be pursued in the future.

References
18. 74 Fed. Reg. 64 (April 6, 2009)