

Editorial

Watching internet pharmacies

Hamid Ghodse

**Summary**

The number of illegal internet pharmacies selling prescription-only medicines without a prescription is increasing. Large quantities of drugs are dispensed, making drugs of abuse readily available, and further risks are posed by counterfeit medication. Urgent national and international

action is required to stop further proliferation of illegal pharmacies.

Declaration of interest

None.

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Effect of the digital revolution on communication and trade

The internet has changed the world of communication and information exchange for the better. It provides a valuable means to collect information, to connect with friends, business partners and the world at large, and to sell and buy goods. It has revolutionised communication and trade. For many of us, the internet has made professional and personal life easier, allowing previously onerous transactions to take place effortlessly and in very little time. As a result, there have been important improvements in the quality of life for people in all countries and, in particular, for those in remote areas who otherwise find it difficult to engage in timely communication and to gain access to services.

The web thus provides valuable services to a growing community of users. More and more people are accessing online medical services, including for the supply of pharmaceuticals by duly licensed and legally operating internet pharmacies. Such internet-based services complement services provided by the traditional healthcare system, in particular for people in remote areas with limited access to medical services.¹

Criminal use of the internet

However, the internet can also be exploited and misused by criminals (e.g. child pornography, the promotion of violence, financial fraud) and for drug trafficking. Drug traffickers use the internet to establish and maintain their criminal networks and to sell illicit drugs or the chemical precursors used to manufacture them.¹

Extent and nature of internet pharmacy

Less well known, but no less dangerous, is the misuse of the internet by pharmacies that illegally sell prescription medicines to the general public without the required prescription. Information from countries where illegal internet pharmacies have been closely investigated suggests that individual pharmacies have a very high volume of transactions. For example, in the USA, it

was found that, in 2006, 34 illegal internet pharmacies dispensed more than 98 million dosage units of hydrocodone products.²

According to studies carried out by the National Center on Addiction and Substance Abuse at Columbia University, the number of websites advertising or selling controlled prescription drugs increased by 70% in 2007 compared with 2006. Of the 187 websites analysed in 2007, 84% sold prescription drugs containing controlled substances without requiring the patient to provide a valid prescription. Further information has been obtained from an enterprise brand protection company which showed in August 2007 that the majority of websites from which prescription drugs were obtainable were operating without proper credentials. Only 4 of the 3160 online pharmacy websites studied were accredited as Verified Internet Pharmacy Practice Sites (VIPPS), the industry credential that assures consumers of the legitimacy of the online pharmacy operations.^{2–4}

Illegal internet pharmacies operate worldwide, in North America, Europe, South Asia, South-East Asia and West Asia, from where large quantities of controlled prescription drugs are illegally shipped to customers around the globe. They are difficult for the authorities to track and take action against because websites may appear suddenly, be moved or be taken down in a short period of time making it easy for the website owner to avoid impending or suspected law-enforcement action. Having closed down, they can immediately relocate to another website and start up the business again. Replicating web searches show rapid changes and replacements within the business and it appears that many illegal internet pharmacies routinely relocate, without any real reason, just as a precaution.⁵ Often, an automatic connection from a closed down website redirects the internet user to a new website with almost identical layout and wording, suggesting that it belongs to the same owner.³

Not all illegally operating internet pharmacies provide prescription drugs without a prescription. Some offer the possibility of online 'consultations' prior to issuing the prescription. In most cases, these consultations rely on a questionnaire to be completed by the customer, but the details provided, including the age of the customer, are not verified in any way. In practice, many internet pharmacies allow the customer to remain anonymous, and indeed many appear to overtly encourage this with references to discreet shipments and to delivery by mail or to a post office box, all of which are signs that the pharmacy in question is operating illegally. This anonymity is utilised to exploit some individuals' reluctance to discuss particular problems (e.g. erectile dysfunction, sexually transmitted diseases such as herpes) with their general practitioner. The so-called 'consultation' procedure offered by an illegal internet pharmacy does not provide a meaningful doctor–patient relationship, but is used as a front to mask the illegal nature of

the transaction, permitting the medical doctor working for the pharmacy to issue a prescription.

Risks of internet pharmacies

Buying prescription-only or indeed any medication online without prior medical/pharmaceutical consultation carries significant risks. Inappropriate medication may be dispensed in inappropriate quantities with no regard for side-effects or interactions with other drugs that the patient may be taking. Furthermore, drugs obtained in this way may be counterfeit medications, ranging from random mixtures of harmful substances to inactive, useless preparations. Counterfeits are always unreliable because their source is unknown or vague and always illegal, and they therefore constitute a danger to the health of individual consumers and the public at large.^{1,6,7} Medicines purchased over the internet from illegal websites that conceal their physical address have been found to be counterfeit in over 50% of cases.

There is particular concern that the anonymity afforded by illegal internet pharmacies affords no protection for children and young people who can easily obtain drugs of abuse via this route.^{8,9} In this context, it is important to understand that among the drugs sold illegally over the internet are narcotic analgesics, including fentanyl, hydrocodone, oxycodone, methadone, codeine, dextropropoxyphene,¹⁰ pentazocine and buprenorphine, and psychotropic substances such as stimulants (e.g. methylphenidate, dexamphetamine, amphetamine, amfepramone, phentermine), antidepressants (e.g. fluoxetine) and benzodiazepines (e.g. alprazolam, bromazepam, chlordiazepoxide, diazepam, nitrazepam, temazepam). All of these substances are frequently diverted to be sold on the illicit market and are misused by drug addicts. As individuals ordering from illicit internet pharmacies may obtain about 100–200 tablets per order, the quantities dispensed illegally contribute significantly to the availability of the prescription drugs that are misused.

The sale of prescription-only medicines outside the legally established framework of *bona fide* pharmacies constitutes a criminal offence and the online sale of such pharmaceuticals by unscrupulous racketeers is no different from more direct trafficking in illicit drugs, endangering lives in just the same way as street sales. Enforcing the law is important, but it is not enough. Preventive measures are urgently needed to stop the further proliferation of illegally operating internet pharmacies and to reduce their number. Their customers are using their services for purposes unrelated to the availability or price of the drugs. Indeed, according to the prices listed on the websites of illegal pharmacies, the substances offered are in fact much more expensive, sometimes by nearly 18-fold, than the same substance purchased through health or social security insurance schemes. For uninsured customers, legally operating internet pharmacies with cheaper prices, even for substances requiring prescriptions, would be preferred over illegally operating internet pharmacies.¹

Policy and guidance

The Royal Pharmaceutical Society of Great Britain has developed a project that will give persons placing orders through internet pharmacies direct access to its website to enable them to verify whether an internet pharmacy is duly registered with the Society,¹¹ which is required of all pharmacies based in England, Scotland or Wales. Visitors to the website can verify the registration details of both the pharmacy and the pharmacist,

thereby ensuring that they are ordering medicines from a *bona fide* pharmacist. In addition, awareness-raising campaigns should alert the public to the potential dangers of illegally operating internet pharmacies.

Strategic measures are also required. National authorities need to ensure that legislation (see e.g. the Ryan Haight Online Pharmacy Consumer Protection Act 2008 in the USA) and the application of laws and sanctions by courts is stricter with regard to the diversion of pharmaceuticals in general and the illegal operation of internet pharmacies in particular; as the internet is a global and dynamic medium, close cooperation between states is important. In conjunction with national experts, relevant international organisations, internet service providers, financial services and pharmaceutical associations, the International Narcotics Control Board has developed guidelines which, it is hoped, will serve as a starting point for international cooperation leading on to globally applied measures to control this comparatively new source of illegal drugs.¹²

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